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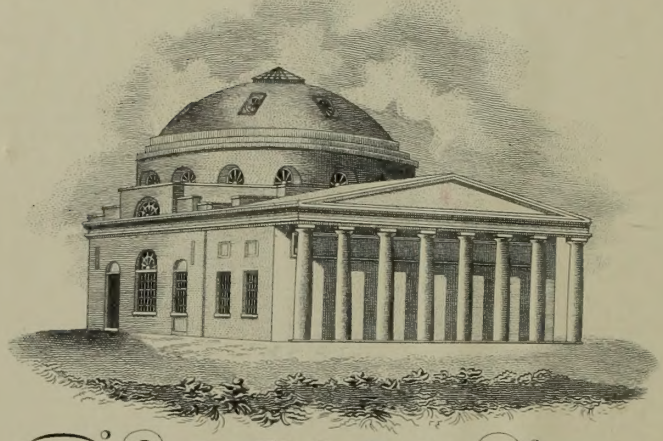

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1837. The individual dissertations were bound together during the 1930's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team also investigated and corrected the tables of contents. Richard J. Peddie, Historical Librarian/Preservation Officer; Maria Bringier Parker, Manuscript Management Librarian; Angela Cochrane and Linda Hyfantis-Henry, Acquisitions Division; Sarah Dowle, Alice Schaub and Megan Wolff, Serials Division.

These dissertations were digitized in 2011-2012 and are available in the UM Digital Archives (archives.lib.umd.edu/dl) and the Internet Archive (www.archive.org).

University of Maryland Theses

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The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.hshsl.umaryland.edu) and the Internet Archive (www.archive.org).

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UNIVERSITY OF MARYLAND

THESES

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McCulloh, John Kyrle	Acute Idiopathic Pneumonia	
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Dorsey, Alexander Warfield	Menstruation	

[1] Thesis content not located in this volume.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
Bowdle, William James	Typhoid Fever	
Taylor, Major Sitler	Typhoid Fever	
Gwynn, William Henry	Typhoid Fever	

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UNIVERSITY OF MARYLAND

THESES

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An Inaugural Dissertation on Necrosis

Submitted to the examination of the

Provost, Regents and Faculty of Physic of the University of Maryland

for the

Degree of Doctor of Medicine

By

Charles W. Koechling

of Maryland

1857

Necrosis.

This term is now generally employed to denote death of bone; it is derived from the Greek verb νεκρόω to put to death. Every bone in the body is liable to be attacked by necrosis, in some it occurs more frequently than in others. Long bones are more apt to be the seat of the disease, but the short bones are affected generally in persons of Scrofulous diathesis. The tibia femur and humerus are mostly attacked. The bones of the cranium are also occasionally affected. The lower jaw, the scapula, clavicle, sternum, ribs, ulna, radius and fibula are sometimes the seat of the disease. If the small bones are attacked, the joints are nearly always affected. Necrosis sometimes

occurs in different bones at the same time. The extent of Necrosis is various. A very small scale may perish on the external part, this is called Exfoliation. A larger portion of laminated texture, or nearly the whole thickness of bone may die in a continuous mass. The whole surface of the bone rarely suffers, the articulating extremities, usually remaining free. Necrosis is generally divided into several stages, viz:

First, Inflammation of the bone. Inflammation may be the result of external injury, as by a fracture, wound or bruise; or it may be of a spontaneous origin.

Second. Death of bone. This may happen in a few hours after the injury has been inflicted, or sometimes

its progress will be very slow, lasting several days. The appearance of the dead portion of bone is ivory white, but if exposed to the action of the atmosphere, it assumes a brown or black appearance.

Third. Separation. Separation is generally very slow and tedious in its progress. It will sometimes last for many weeks, and even months have passed away in some cases, before the sequestrum has become eliminated. The living parts around the dead portion of bone are softened and increased in vascularity, carrying on an inflammatory process, terminating in ulceration and suppuration, which after a long time deepens and separates the dead from the living bone. During this stage of separation a constant

secretion of matter is kept up dis, charging, which either makes its escape through certain openings already existing in the soft parts; or it makes its way to new parts where it will become necessary to let it out, by making an incision. The appearance of this discharge is yellow and thick, and is sometimes charged with ulcerated pieces. It possesses an op, pressive and peculiar odour, which may be easily recognised, when once felt, as a certain sign of necrosis. And Fourth, Reparation. Reparation originates from the living margin of the bone by osseous granules and begins at the same time with sepa, ration. Thus it is a most provident and beneficial arrangement in Nature, that the necrosed part is scarcely dead, before the formation

of its substitute has set in. When the whole thickness of the bone is attacked, the new bony structure which is formed, is attached to the healthy part, near where the sequestrum has been separated, and almost completely surrounds the dead portion, except a few openings through which the matter flows.

Symptoms. Necrosis generally commences with inflammation in the bone itself, or in its investing membrane, which is accompanied with acute pain. The pain is at first felt in the joint nearest the affected part, but in a few days it leaves the joint and settles itself in the inflamed part. The surface is firm and unyielding to the touch. Severe symptomatic fever generally occurs from the beginning of inflammation.

The patient has chills sometimes, with frequent and quick pulse, little rest at night, furred tongue and loss of appetite. The stomach and bowels are not much affected. About the fourth or fifth day the local affection generally terminates in suppuration. At first the matter is situated between the external periosteum and the bone, there is also matter collected between the internal surface of the bone and the surrounding substance. The whole limb soon swells; there is no marked tumefaction in the part, until the matter has made its escape from the periosteum to the soft parts. Then the fever and pain generally subside a little, but do not intirely leave the patient. The matter makes its way, to the surface, through several apertures,

the external orifice of which is called papilla; the internal cloaca. The presence of dead bone is detected through this canal, which assumes a fistulous character. The condition of the dead bone is from time to time ascertained, by the use of a probe, or if the opening is large enough by the insertion of the finger. When the sequestrum is external, it is smooth and solid when felt, if internal it is rough and dense. When the sequestrum is entirely detached from the living bone, it does not always seem loose, as it may be bound tight by some new crusty formation. In most cases however it is more or less moveable, and if not artificially removed, it makes its appearance at the surface and projects. When the sequestrum has been removed, the inflammatory process

slowly subsides in all parts.

Causes.— The inflammation which brings on Necrosis has often been excited by injuries and blows inflicted on the limb. Musket balls, fractures and burns, Sudden suppression of perspiration; Bathing, in cold water, when the body is hot, are some of the most exciting causes. Necrosis occurs in all periods of life, and in both male and female. It is mostly confined to young subjects between the ages of five years and twenty years. It is very rare in old persons.

Treatment.— At the commencement of the disease, before suppuration has taken place, the most desirable thing would be to prevent the formation of matter, and thereby preserve the bone from injury. The seat of inflammation is mostly marked by,

swelling and tenderness of the part; a free incision is made longitudinally through all the soft parts, down to the bone and through the periosteum. It is then treated like a simple incised wound, but the lips of the wound should not be drawn together by adhesive plaster, but should be kept open by packing it with lint, and dressing it with simple cerate, and the application of evaporating lotions as far as the inflammation has extended. The patient is otherwise treated with cooling purgatives and opium to allay irritation. In the second stage when the matter has formed between the periosteum and the bone, a free incision is made through the soft parts, and the periosteum is perforated and divided to allow the matter to escape, and thereby prevent any loss

of bone, which might otherwise occur from the presence of the matter. In the third stage, when the matter has made its escape through the periosteum to the soft parts, a free and direct incision is made, and the detachment of the sequestrum is left to nature. Force should never be used to detach the sequestrum, as no good can be accomplished, and the patient is put to unnecessary pain. When Nature's effort has been accomplished in loosening the sequestrum, it should be removed as soon as possible. A free incision is made, and the extend and form of the dead portion is ascertained through the cloacae, and if the opening be large enough, the forceps are introduced, and the sequestrum is seized and removed. Sometimes however the opening

is not large enough, then it becomes necessary to convert two cloacae into one, which is done with a saw, cutting pliers, or with a trephine. Forceps are the best adapted instruments for extracting bones. They should be strong, and blunt, made for the purpose. The dead bone is firmly grasped and gently moved to and fro to ensure its freedom from the surrounding substitute; and by steady pulling it is brought to the surface. When the dead portion of bone is long, the extraction is often made easy, by cutting through the middle with the bone nippers, and extracting both pieces separately. It often occurs that from delaying a necessary operation too long, a portion of bone looses its vitality, and becomes a foreign body, and inflammation

being set up a discharge of matter is kept up as long as the sequestrum remains. The dead portion must then be removed early, or a new bony structure will be formed over the sequestrum. When the whole cylinder of a bone has been destroyed, the operation must be delayed, until the sequestrum has been surrounded by a new bony structure. This is necessary to preserve the length and shape of the limb, because the limb would be reduced to a fracture by the operation, and probably be much shortened. When new bone has formed around the sequestrum, the limb is somewhat larger at that part, and feels hard. The instruments requisite for this operation are a probe or director, knife, Heys saw an elevator and several pairs of

strong, forceps. The director is at first inserted into one of the principle openings, the knife is then introduced and carried upwards as far as necessary, and if the sequestrum extends below the director, another incision is made downwards. Sometimes there are small openings left in the new bone, through which the dead bone is extracted, by first cutting it into pieces. Care is to be taken in all cases to avoid wounding arteries and tendons. After the sequestrum is removed, lint is put in the wound, to keep the external orifice from uniting by first intention, and to allow it to heal from the bottom. The limb is kept quiet and free from pressure and motion, as the new bone is yet weak, and would either bend or be fractured by too freely exercising it.

After some time, when the limb has its natural appearance again, the patient should now and then exercise the limb at the articulation, to prevent anchylosis, and rub the other parts of the limb well to promote circulation. Thus in the end the patient will have a good and useful limb again.

Coloured man Basil ——— native of Prince George County Maryland; Occupation, Carpenter; Aged thirty years; Sick four years with Necrosis of the femur, was admitted into the Baltimore Infirmary on the sixth of January 1857 with the following history.
When first led to notice his disease, he found on inspecting the limb, a few small pustules, giving spontaneous issue to a thin sanious discharge. Some degree of lameness soon exhibited itself with but

little constitutional derangement. As the disease progressed the lameness increased. A Physician was called in to examen the case, and the opinion was, that, the man was laboring under "White Swelling" and to console the patient remarked in Emphatic terms, that the malady was incurable. Nothing was done. The con„ dition of the man, when he came under the notice of Professor Smith was this: Considerable lameness, cicatrices covering the whole course of the femur externally, with considerable enlargement of the limb. The mans thigh was examined with a probe, and sinuses where found, taking their origin from the bone. The part was laid open by a free and deep incision, and a poultice of flaxseed meal ordered to be applied. The dis„ charge was at first thin and sanious, but constitutional remedies beeing

advised, such as Potassae Iodidi grs X three times a day; generous diet; and a succession of blisters to be applied to the thigh. This man is now progressing finely, and if no unfavourable symptoms should supervene, the Physician who first saw this man, will have the pleasure of seeing "the lame to leap for joy" and the incurable "White Swelling" reduced down to a curable Necrosis under the almost magic knife of Professor N. R. Smith.

An
Inaugural Dissertation
On
Amenorrhea
Submitted to the Examination
Of the
Provost Regents
and
Faculty of Physic
Of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Silas Harbaugh
of
Frederick Co. Md.

Amenorrhea

Of all the ailments which the medical profession are called upon to treat there are none, perhaps, of more interest to the practitioner or student than those which impair the generative system of the female.

It has been admitted that the uterus and its appendages make woman what she is and I believe it is just as true that if the generative function of the female be not perfect in its, or its relations, then the woman so affected does not possess that true feminine nature in which she is so much admired

into the normal condition.
Many, very many of the ailments of
females, during that period of life
in which they are destined to re-
produce their species, are caused
by some irregularity of the
sexual system.
It is this that steals the rose
from the cheek, the lustre
from the eye, the elasticity
from the step, and the joy
from the spirits of the young
female who is just entering
upon, or who has already entered
into that condition of nature.
It is in which an allwise Providence
designed that she should assist

in reproducing his most noble work. With these views, with an ardent wish to use my utmost abilities to relieve such of these cases as may be entrusted to my care — with a firm determination never to betray my trust, I devote confided time in such cases — and with a strong desire ever to uphold the dignity of the honorable profession of which I have to form an humble member, I have chosen that condition of the female named at the head of this article for my

graduating thesis, and I most humbly submit it to my preceptors for their judgement and decision.

Until the female has arrived at the age of puberty her physiological condition is little different from that of the male: but about this time a great change takes place, both in her physical and mental condition. Her chest greatly expands, and her pelvis, which had hitherto been as narrow as that of a boy, now spreads out and assumes a more elegant shape.

The mamma commence enlarging, the muscles more fully developed, and the whole body assumes a more beautiful and symmetrical proportion. Her voice is generally changed to a more soft and feminine tone, and the complexion often becomes more clear and fair. The pursuits which had been the pastime of the girl now no longer amuse her, and those of the woman are gradually assumed.

These are some of the

signs which mark the period for the appearance of the menses. This may happen in the intimate in the thirteenth year, more often in the fifteenth, and sometimes not until the seventeenth year of the female's age.

This flow usually ceases, in the woman in forty five but sometimes the cessation is a little sooner than this, and there are also some females who continue to menstruate until they are fifty years of age. I am now acquainted with a woman, who is past fifty years, whose catamenia ceased

but about six months since.
The menstrual discharge of the human female is now generally considered to be blood, mixed with the secretions of the uterus and its appendages. The medium quantity of blood evacuated at each catamenial period is about five ounces, and the healthy extremes are between three and ten ounces; and these periods return, in healthy females, once in twenty eight days. The extremes of the return of the menses may be twenty one days and five weeks and yet there may be no deviation

from health. The period during which this flow continues lasts from three to five days during which time the female is protected by a napkin or proper bandage to prevent her condition from being exposed.

Many different and ingenious theories have been proposed as to the cause of menstruation, and it is not for me to say who is right or who is wrong, but that theory which connects it with the maturation and deposit of the ova, called ovulation, seems to be the most rational, and the best sustained by facts.

The blood is exhaled from the inner surface of the Uterus, and passing down through the vagina, makes its appearance at the vulva.

The acts of ovulation and menstruation are so intimately connected with the living system of the female that any interruption or irregularity therein, unless caused by pregnancy or suckling, or by the age of the patient, soon affects the general health, and leads to the worst grievous results.

Amenorrhea is that condition of a female who, from some some unnatural cause, has ceased

to menstruate. That condition of amenorrhea in which a young girl has passed beyond the proper time for her catamenia to have appeared without the sanguiferous sign, and whose health is affected thereby, is called amensio mensium.

There may be amenorrhea from debility, where the life force is much reduced below the standard of healthy action, and also amenorrhea in a system exalted by pletora or a superabundant circulation. The force of these conditions I shall just consider.

This form of amenorrhea appears

to depend upon hydraemia or poverty of the blood. A young girl arriving at the age of puberty and the recent and extraordinary calls upon the nervous and vascular systems for an increased amount of vital forces to enable her to fulfil the new and important offices then imposed upon her. Often, at this time, when the nerve force is struggling to perform the new duties it is called upon to accomplish, it is tasked still farther in the mental studies and close confinement that accompany school life. Consequently, at a time when, the young girl is required to

sit from twelve to fifteen hours out of the twenty-four in the laudable undertaking of "learning a trade." The consequence is that the solid constituents of the blood are consumed beyond the power of reproduction, and hydræmia of the blood supervenes. If the cachemia has been established it now ceases, and if it has not yet appeared, it will not appear under the present state of the system.

In this form of anæmia the face is pale, the eye almost colorless, the hands and feet are cold, the circulation is weak and easily excited, the respiration

much hurried by exercise, and the muscles soft and weak. The mind is dull, and the spirits sad and depressed. The appetite is bad, and sometimes very peculiar and capricious, craving after improper and indigestible things, such as pieces of slate pencil, bits of chalk, &c. If this condition is allowed to continue, the symptoms become yet stronger, the complexion becoming cadaverous, the eyelids assuming a dead lead color, while the surface of the body becomes unwhanded, and tinged with a bilious hue. The stomach and alimentary canal sympathize

growth, the bowels being sometimes troubled with a distressing diarrhea, and at other times obstinately constipated. But the principal seat of the disease is now perhaps situated more especially in the nervous system, which is much affected. The nerve pains are severely painful and intolerable, and at such times almost unbearable. Chorea is a frequent complication, especially in those cases in which the discharge has never yet appeared. Epistaxis, catalepsy, and all the varieties of neuralgia, are frequently attendants on this condition.

The outward change in the person is often so very great that she is scarcely to be recognized as the former self.

The treatment in such cases should be such as would be likely to raise up the functions of the system, and particularly such as would give tone and vigor to the nervous system, and invigorate the blood. The great remedy to be depended upon is iron.

The blood in such cases is always greatly deficient in its solid constituents, and it must be iron alone, or some of its preparations, which is to raise

the vital fluid to its healthy standard. There are many, chiefly by which have been explained by as many different medical authors, and it is probable that all of them are of more or less value. In testing of Philadelphia for arsenic very highly the properties of pure hematite iron of M. M. Quevenne and Mégnard, prepared from the oxide of iron by the action of hydrogen, thus withdrawing the oxygen and leaving the iron pure, in a state of impalpable powder. That eminent physician contends that the addition of the administration more readily and

the pure iron into salts adapted to the particular occasion, than can the ingenuity of art.

Vallet's Pyro Tart. Iron is considered a good preparation, so, also, are most of the preparations of the Carbonate of iron of the U.S. Pharmacopeia, as well as the sulphate and muriatic tincture. The dose of the Iron by hydrogen is about two grs. to be exhibited in the form of pill, after each regular meal, and if necessary, gradually increased. The Carbonate may generally be administered in doses of from five to twenty grs.

and the sulphate in the dose of from one to five grs, three times daily, using that preparation which seems best adapted to the occasion. The state of the bowels must also be attended to, and aperient doses of some of the preparations of aloes should be occasionally given. The compound pill of aloes, the pill of aloes and rhubarb, the pill of aloes and myrrh, Lady Webster's pill, & the pill of aloes and assafoetida, are some of the preparations from which the practitioner can select his choice. The diet should be generous, but such

fruits and vegitables as do not admit of easy digestion should not be allowed. Roast beef or mutton or roast chicken might be freely eaten, as also might most of the varieties of wild game. Strong tea or coffee should not be used, but a moderate quantity of wine, not adulterated with brandy, may be used instead. On these cases much may be accomplished by exercise in the open air. Plant a fruit tree in a thin soil, and it may annually send forth a small crop of leaves, but there will be no flowers and consequently

no fruit; take one also from the open air, and place it where the rays of the sun cannot fall upon it, and it will become delicate and pale; but place it now in a generous soil where the winds will keep it in exercise, and where the rays of the sun will fall upon it, and it will assume new life and vigor, bringing forth beautiful blossoms and fully matured fruit. The same thing will apply precisely to the case of the young girl, at the time that she requires new energies to fully her accomplish the

important task of fruit-bearing, so to speak, if you take her from her girlish sports and exercises, and condemn her to intricate studies, close confinement, and, perhaps, to spare or unsuitable diet, you overtask the producing power of her living system, and, like the fruit tree in the steril soil, she will not commence the most important duty of her creation, or if she has already commenced it, it will soon be suspended. How many melancholy examples have we of this kind in our boarding schools, and in girls who are kept constantly

at the needle, or some other sitting employment. She must therefore have rest from onerous studies or duties, and have plenty of exercise where there are wind and sunshine. Nothing can be more tonic and exhilerating than the pure, fresh breezes of the country; such air is as much the natural stimulus of the system, as light is of the eye, or blood the heart. The exercise should be commenced gradually, and increased as the strength increases. Walking over rough roads and fields when the weather is dry,

or riding on horseback, or dancing. Taking care against sudden exposure to cold when heated or perspiring, are some of the modes of exercise most recommended. Travelling abroad, change of scene and employment are sometimes very serviceable. The dress should be warm but not oppressive, flannel being worn next the skin in cold weather, and the feet should be kept warm and dry. The mind should be kept as free as possible, and any weight or sorrow hanging upon it should be removed if such could be accomplished. Amenorrhea

depending on debility or hydraemia, by persuing the foregoing course of treatment, will generally be cured in from two to five weeks.

In that form of amenorrhea where there is a full habit or plethora, the symptoms will be very different, as must also be the treatment. The symptoms which mark this form are high fever, distracting headach, hurried circulation and respiration nausea and vomiting, tenderness of the abdomen and pelvic region, nervous agitation, hot skin, thirst, and in fact all the symptoms of inflamatory fever.

There are also sometimes severe pain in the pelvic region, running down the thighs, intolerance of light, and delirium. The vicissitudes of the weather, fright, grief, or sudden emotion are some of the causes which lead to a sudden suppression of the menses.

The treatment in such cases must be safe, such as will relieve the inflammatory symptoms, and reduce febrile excitement; and lastly, such as will restore the uterus to healthy action, without undue stimulating the system, or the fever running.

and there are strong cerebral symptoms, blood should be taken from the arm in quantities sufficient to relieve those symptoms. If general bloodletting be deemed not admissible, or should it be strongly objected to by the patient or friends, cups or leeches should be applied to the pelvic region, or in cases of delirium, to the temples or back of the neck.
The liver is generally torpid, and the portal circulation gorged, so a mercurial purgative will be almost always indicated.
The bowels should be kept regulated, gentle aperients, and

the cutaneous secretion should be invoked by diaphoretics. To fulfil the 2nd indication, viz. that of inciting the uterus to its proper function, we must increase of some of the drugs which have been considered emmenagogues. Of these I may name aloes, savine, myrrh, guaiacum, black hellebore, cantharides, cajeput, rue & ecbolics. These are tried in succession or according to the judgement of the practitioner. The warm bath may sometimes be used with most advantage, it should be applied for at least half an hour; and at the

proper period when the menses would have appeared in the natural way, every effort should be made to induce the uterus to resume its proper function. The diet should be light and unstimulating as long as there are febrile symptoms, but at later periods of the complaint it may be generous and stimulating.

Amenorrhea may result from some mechanical impediment, or malformation. It may be the result of imperforate hymen, or atresia vagina. In these cases the fluid will be poured into the uterus until the organ becomes so

modified that the patient is obliged to seek medical advice. Cases are on record where women have thus menstruated internally for many years, and the uterus has been enormously distended with the accumulated menses so retained. In these cases the only remedy is the knife. But much judgement and careful examination are requisite in determining in what cases, and in what manner, it may be used. Again, amenorrhea may be the consequence of a morbid condition of the uterus or ovaries.

If a female shall arrive at and pass beyond the ordinary age of puberty, without any signs of the menstrual flow, and at the same time her general health is good, we may fear that one of these causes exists. If upon examination we find the mammæ fully developed, the external genital organs of natural size, and the vagina ending in a cul-de-sac, we may presume that the ovaries are fully developed, and that there is no uterus, which may be verified by an examination per rectum.

Again, where there is no sexual desire, where the mamma are flat, and the external organs small, and the vagina natural, we may suppose that the uterus exists, but that the ovaries are wanting. Where these signs are combined the womb and the ovaries will both be most likely absent.

For these unfortunate cases, there is of course no medical treatment.

An
Inaugural Dissertation
on
Cynanche Trachealis
Submitted to the Examination
of the
Provost Regents and
Faculty of Physic
of the
University of Maryland
for the
Degree of
Doctor of Medicine
By
Joseph Ford Thompson
of
Maryland
1857

An Inaugural Dissertation

Upon

Acute Idiopathic Pneumonia

Submitted to the examination of the

Provost, Regents and Faculty of Physic

of the

University of Maryland School of Medicine,

For the degree of Doctor in Medicine

by

Dr. R. McCulloh

of Md.

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Acute idiopathic Pneumonia implies active inflammation of the substance of the lungs, manifested by febrile excitement, pain, dyspnœa, cough, & a peculiar expectoration.

In a strict sense, the inflammation is considered as particularly involving the parenchyma, though the bronchi of the affected lobules are always implicated with it. Different opinions exist in regard to the proportion of cases in which it is complicated with Pleurisy. Andral alleged that the inflammation extended to the Pleura in a large majority of instances, & for this reason proposed substituting Pleuro-Pneumonia as a more suitable nomenclature. But Lannec properly contended that where it was accompanied by pleuritic disturbance, this last should be considered as a complication of the disorder, & should not be recognized unless the symptoms were modified by it. The proper seat of the inflammation appears to be the capillaries of the pulmonary circulation.

The inflammation varies in severity & extent. It may be confined to a part of a lobule, or a lobe, & sometimes it attacks the greater portion of both lungs, & is then called double Pneumonia.

Pneumonia is excited by the impression of cold, overexertion of the lungs, by the inhalation of irritating vapors & asphyxiating gases, by wounds penetrating the thoracic cavity, & by severe blows on the chest.

There is no difficulty in understanding that inflammatory action is excited by the impression or continued action of physical agents, the only mystery is, why such causes are not followed by Bronchitis instead

of Pneumonia, for they are certainly brought first & more directly into contact with the mucous lining of the bronchi, & air vesicles.

But what the modus operandi of cold is, as inducing ~~inducing~~ diseased action has not been ascertained, A favorite hypothesis of the present day is, that as the function of the lungs has an important part in the generation of animal heat, so when this warmth is reduced there is a demand made upon the lungs to a corresponding extent, a greater amount of venous blood is now conveyed to them, which requires increased function, This disturbance being continued conduces to a condition favorable to the development of inflammatory action, but if the cause be not violent, or long continued, the congestion in a great measure will be relieved by the due de-carbonization of the blood, before the capillaries have had their elasticity impaired, & thus there will only result a slight bronchial affection, an effect of disturbance experienced in a minor part of the capillary circulation. but should the cause be continued, congestion becomes fully established, & a condition is induced, favorable to high inflammatory action, whenever reaction shall be established. But it is evident that all attempts at explaining the action of causes in the production of vital phenomena, are met with insurmountable objections, for if any one understood the ultimate workings of nature, he could explain why exposure to the same causes at one time would induce Pneumonia or Bronchitis, & at another occasion excite Pleurisy or Pericarditis.

It often happens that Pneumonia arises from such slight impressions that the patient may not remember the exciting cause, but it is well known that inflammatory action is more liable to supervene upon

sudden changes of temperature, than from continued cold. It is when the secretions are fully excited by warmth, & suddenly checked by exposure to cold that violent inflammation is generally aroused.

When inflammation sets in it determines to produce characteristic changes which are modified by the great vascularity & peculiar structure of the lung. The first defined condition which the diseased portion presents is engorgement, an appearance somewhat similar to the local exhibition of inflammation in other tissues. Owing to the structure of the pulmonary vessels, bloody serum exudes from them into the parenchyma & submucous tissue as long as congestion persists, ~~& it is owing to the nature of this effusion, I suppose why circumscribed abscesses are an unusual event of Pneumonia.~~

The lung now is of a dark red color, it is gorged with a frothy bloody fluid, its weight is increased for it evidently contains much less air than a healthy organ, but still any part of the viscus will not float in water. It crepitates less under pressure & is less elastic, retaining the impression of the finger.

In making examinations after death, it is necessary to be aware that the dependant portions of the lungs present a similar appearance, as the result of mere mechanical gravitation of the blood during a long decubitus in protracted disease. If it happened that inflammation attacked the dorsal aspect of the lungs, it would require knowledge of the precursory symptoms to decide its character. But whenever the superior lobes are engorged, then we know that it results from inflammatory action.

As the disease progresses another appearance is effected, ~~which~~

which on account of its cut surface resembling a section of liver has received the name of red hepatization.

The lung is now of a chocolate color mottled with darker points. Its weight is sensibly increased, the diseased portions no longer float in water.

A section displays an uniform dark color, beaded with darker drops of a grumous fluid, which start out from the divided ultimate branchi. In fact the interstices of the organ are filled with diffused lymp. & altered blood.

At each stage of the diseased action, the lung becomes more friable, until at last it breaks down, under slight pressure into bits which immediately fill with a sanguino-purulent fluid.

In this condition, the texture of the organ is infiltrated with pus, its external appearance is of a drab mixed color, its cohesion has been so much altered, that it tears under the knife into a confused appearance of disorganized tissues, altered blood & pus. In this condition it attains its utmost weight, which is sometimes increased tenfold.

Circumscribed abscesses & gangrene are rare events of Pneumonia. Gangrene is attended with a very fetid odor. The other conditions are not accompanied with fetor.

Thus while hidden from sight the lung presents one condition after another. & when the inflammation is extensive it sometimes happens that all three conditions exist in different parts of the same organ at the same time, though crepitus alone, may be detected during life.

It is probable that this unusual state of the lung is caused either by the gradual extension of primary inflammatory action into other portions, or else owing to some predisposing cause, some points are brought under a more intense action of the disease.

As might be anticipated these conditions do not present an uniform or unvarying appearance; The character & extent of inflammation, the influence of remote causes, & the establishment of intermediate stages, conduce to ~~produce a diversity~~ deviations from these distinct conditions

Thus the lung assumes an unnatural look ere the condition of engorgement is fully effected, & as the diseased action evinces a disposition from the first to attain its acme, it is continually passing out of one condition into another & thus the intermediate state between the first & second conditions has been called splenization & again if while the lung is in the second condition, the grumous mass be scraped away, a purulent fluid will be found underneath & this has led authors to quarrel with the term red hepatization.

From first to last characteristic symptoms attend each condition, while auscultation will detect certain morbid sounds that accompany each stage. But we may have no assistance from this source, if the disease is limited to some lobule remote from the walls of the chest.

The morbid sound which marks the period of engorgement is minute crepitus. In the commencement of engorgement it is heard proceeding from a single spot & mingling with the normal vesicular breathing. In a little while it will be observed extending over a

larger area, & becoming more distinct, it at last entirely supersedes the vesicular rustle. When these sounds exist there is reason for supposing that the inflammatory action is not intense; but when minute crepitation alone is heard, we believe the condition of engorgement to be established.

However the crepitant sound is not heard long in any one part, but as the disease advances it becomes less distinct until it is no longer heard. Should there now be a tendency towards resolution, crepitus & vesicular rustling will recur & disappear in reverse order, until the sound of normal respiration alone remains.

Should the inflammatory action be unarrested, the condition of red hepatization will be denoted by bronchial respiration & bronchophony accompanying other symptoms, while at the same time percussion will elicit dullness from the affected side.

If there was now a determination to health, the sounds which have been described would reappear, mingle together, & depart in a retrograde succession. But should there be no evidence of returning crepitation, auscultation cannot inform us whether the condition of red hepatization is constant or superseded by purulent infiltration. The destruction & removal of portions of lung would give rise to large or gurgling crepitus in the cavities so formed.

Pneumonia is usually ushered in by rigors, or irregular shivering alternating with flushes of heat, attended with a sense of depression or extreme prostration. This is followed by pain, dyspnoea, fever, & cough with a characteristic expectoration.

The pain is usually referred to the region of the nipple, though its position may be varied by the situation of the affected lobes. Usually it is not severe, unless the disease is complicated with Pleurisy.

The dyspnoea is not uniform. At one time it may be unnoticed by the patient while in another instance he may appear wholly occupied in respiring, his face livid or pale from exhaustion.

The cough is not characteristic, it does not usually occur in paroxysms, while its frequency bears no proportion to the severity of the disorder. In the beginning it is either unattended with expectoration, or with mere bronchial mucous, but by the second or third days the sputa become viscid & rust colored. The appearance of these sputa taken in connection with other symptoms, may be considered as a pathognomic sign of this disease.

The fever is usually high at first, but does continue so long. It is attended with restlessness, heat of surface, thirst & sometimes with delirium. The stomach is often irritable, the tongue coated with a white or brown fur. The urine scanty & high colored. In plethoric persons the face is flushed, the eyes suffused & sometimes there is headache.

At the advent of the second condition, the dyspnoea becomes more urgent, the respiration is accelerated; the patient pants & stops in his conversation. The sputa appear of a darker color & so viscid that they cannot be detached from the sides of the containing vessel by any shaking. The pulse is quick, but not so full.

When the expression of the patient ~~is~~ becomes anxious, his features pinched, his appearance cadaverous, when his pulse is rapid & small, when the sputa are flecked with pus, or the expectoration alters in character & resembles prune juice, there is strong probability that the third condition is established, & this supposition is sometimes strengthened by the appearance of portions of destroyed lung in expectoration.

Before the time of Laennec the concurrence of pain with pulmonary disturbance distinguished Pleurisy from Pneumonia. At the present time the diagnosis of Pneumonia rests upon the presence of definite auscultatory signs, & the rust colored sputa as well as in regard to the character of general symptoms, as affirmatively & negatively by the absence of auscultatory sounds which are characteristic of Pleurisy, & ~~Pneumonia~~ Bronchitis. At the same time, owing to the amount of inflammation, its tendency to implicate other tissues, the extreme debility of the patient, or unavoidable delay, we may not always be able to observe proper signs. The treatment differs in respect to blood letting, & the choice between mercury & antimony. The pulse will indicate as to the propriety of debilitation, while these minerals may in a case of doubt be prescribed in combination.

In acute Bronchitis there is little or no pain, while the dyspnoea is usually urgent. The pulse is frequent, full, & soft. The cough is paroxysmal. The expectoration glairy at first, but afterwards viscid, & streaked with blood. When the secretion becomes profuse there is either marked abatement in the severity of the symptoms, or a tendency to death from exhaustion & suffocation.

In the first condition of Bronchitis, owing to the dry & rigid condition of the membrane it is accompanied by sibilus arising from this & other causes whence; but when the membrane is coated by a profuse & tenacious mucous the entrance & exit of respired air, struggling among this viscid collection produces large crepitus.

In Pleurisy on the contrary, the pain is acute & of a stabbing character, it is increased by the act of respiration. In the first stage of the disease the dyspnoea is usually slight, although the severe pain which accompanies each expansion of the chest causes the sufferer to make compensatory efforts by short, constrained hurried respiration. The cough in Pleurisy is usually dry, but not peculiar. The febrile symptoms are strongly marked, the pulse quick & hard.

Pleuritic inflammation is first intimated by a chafing sound, caused by the roughened pulmonary & sometimes costal pleuræ passing over each other during respiration. If it be not a case of dry Pleurisy the inflamed membrane will effuse a lymph-serous or bloody fluid into the shut cavity. At first ægophony, supposed to be the vibrations of the voice modified by their passage through a stratum of fluid; afterwards succussion; increasing dyspnoea, faint respiratory murmur; & as the sac becomes distended; the disappearance of all respiratory utterances; dullness beyond the middle line of the sternum; & displacement of the heart, attest the presence of pleuritic effusion

On reviewing the succession of symptoms it will be found that ~~the disorder~~ Pneumonia is first manifested by nervous derangement, which is followed by pain, a difficulty of breathing depending in part upon an impervious condition of a portion of lung, & also arising from a disturbance of the due harmony subsisting between the functions of the heart & lungs. After a time cough is excited by the action of the diseased parts through the recurrent nerves. The lining membrane of the bronchi wherever implicated are at first dry & humid, but after awhile secrete profuse altered mucous; furthermore a bloody fluid gains admittance to the minute vessels within which mucous is elaborated, which imparts color to the sputa within which during the efforts of respiration & coughing air is entangled, producing a spumous appearance.

The amount of dyspnoea, cæteris paribus is in proportion to the extent of inflammation, & it is more urgent when the superior lobes are the seat of disease. Where there is no cardiac disease, respiration is hurried in proportion as the pulse is accelerated, but besides this abnormal condition, a variable amount of the respiratory apparatus becomes for the time useless so far as fulfilling its designed purpose. The right ventricle continues to force an undiminished supply of blood through the pulmonary artery. In the face of all obstruction, a strain is imposed between the semilunar valves & ultimate capillaries. This unnatural state becomes more ~~disordered~~ fully established until the capillaries stretched to their utmost tension allow the thinner portions of blood to strain through

their coats. As the inflammatory action becomes more intense, it causes lesions in the parts, the diseased portions become altered in structure: a lympho-sanguineous mass infiltrates the submucous tissue of the ultimate bronchi & air vesicles, & in some cases there appears to have been a direct infpouring into them. During each stage of this morbid condition, the lung becomes more friable, when in the event of lues being formed they it appears disorganised & ready to break down under the slightest pressure.

Dyspnoea is unfavorable therefor in direct proportion to its urgency, for besides owing to the imperfect de-carbonization of the circulating blood through the brain it is apt to induce a state of imperfect coma or low muttering delirium, which are properly attendant symptoms. Furious delirium may be looked upon as arising from inflammatory action & therefor a complication of the disease. The blood in Pneumonia is highly buffed & cupped approaching in character to that fluid when acute Rheumatism.

The average duration of Pneumonia is ten days. The prognosis of any case will depend upon the time in which attention was obtained, the extent of inflammation, the amount of dyspnoea, the consistency & color of the sputa & the appearance of cerebral disturbance, while no one should be pronounced out of danger until bronchial respiration & expiration have disappeared & are succeeded by the vesicular rattle.

The first indication is to relieve the pulmonary circulation, after that, & with that pain, dyspnoea, & general constitutional excitement. But before putting it in practice it is requisite that treatment should regard the age & constitutional peculiarities of the patient & the stage of the disease, as well as the amount of disturbance. At first the pulse is usually full & frequent, but does not retain this character long. In another case it may be small in the beginning, but develop under treatment. While it is sometimes feeble from the beginning & continues so throughout the attack. This last mentioned character of the pulse is looked upon as an unfavorable symptom, for it either exhibits low powers of reaction arising from debility, or else that the recuperative tendency is held in abeyance by the violence of the disorder.

Placing the patient in a sitting position & then taking blood from the arm in a large stream until the pain & dyspnoea are abated to a marked degree or until faintness is produced is considered as most efficacious in the condition of engorgement. By this means the remedy is directed to the subduing of febrile excitement, to the relief of pain, to the removal of engorgement, & thereby restoring equilibrium to the heart & lungs. Or in other words recovery is hastened or induced by the removal of the cause & by making a decided, & lasting impression upon the inflammatory action. The severity of the diseased action will be in proportion to the character of the exciting cause & predisposing circumstances. Thus the inflammation in some cases would of itself stop short of the full

or complete establishment of the second condition. By this I mean that the inflammatory action being slight in character & amount would be arrested by the vis medicatrix naturæ ere it had advanced beyond a certain point. While in many cases the disease advances rapidly from the first to a fatal condition or conclusion in spite of all that attention can do.

The patient may sink under the violence of the onset or he may linger through its hectic stages.

After a decided benefit has been experienced from venæsection, it is desirable to bring the patient under the influence of tartrate of antimony by doses of ½ gr every hour & increasing to j gr by three hours. Should effusion into the pleuræ be suspected, doses of Hydrargyrum grs ij should be given with the antimony until its specific effect is produced. If pain or dyspnœa continued urgent the attendant would have to decide between general depletion & topical bleeding. Then a large blister should be put over the whole chest, provided the febrile symptoms had abated their violence. There is no doubt that depletion has been carried to an extreme in many cases of Pneumonia as well as in other diseases. The practitioner either not knowing or forgetting what strength will be required of the patient in after stages of the disease. However it sometimes seems as if the balance of between life & death was so evenly struck that an ounce of blood either way would settle it.

In the second condition of Pneumonia, the indication is

o remove the lymph which is impacted into the substance
the lung. General depletion does not effect the absorption of
mph as rapidly as calomel, but if the pulse was yet preternaturaly
ll, or if the blood still shewed a buffy coat, & cupped appearance
would be advisable to take blood. After this mercury should
prescribed until its specific action was produced. To hasten this
would be as well to use the linament Hydrargyri, as to administer
in substance by the mouth. It is in this condition that Blis=
s are most serviceable.

It sometimes happens, particularly in the case of
ose who from unhealthy occupations, or pernicious habits have
hressed the energies of life, that nervous disturbance predomi=
ates over all other symptoms. In some of these instances there is
anger of the patient sinking during exacerbations of excitement,
or although ~~this drug~~ Opium is contraindicated whenever duskiness of coun=
nance, or lividity of the lips indicate derangement in the proper
ration of the blood, yet it often happens in such cases that the
rgency of the dyspnœa abates under the composing influence of nar=
ics. But the treatment of such cases, as well as of any untoward
ymptoms which may arise, must be left to the discretion of the
hysician to choose the least of any two evils.

Up to the third period of the disease it is requisite that
he patient observe a strict antiphlogistic regimen, but when a
ondition of purulent infiltration, of circumscribed abscesses or gan=
rene becomes established, the indications are to support life, & stimulate

the flagging powers of life to action, by a strong diet such as Beef tea, & by diffusible stimulants, Ammonia, Brandy, & Wine whey.

Relapses are liable to take place during recovery from this disease, while one attack of Pneumonia is the strongest predisposing cause to others. Dr. Rush of Phila. & others mention persons who have had a recurrence of this disease fifteen & sixteen times. At the same time it may be that Pneumonia being easily excited in weak lungs, is apt to recur from any unusual exposure, so long as this weakness lasts, for if it were otherwise the conclusion would be ~~evident~~ unavoidable, that some permanent lesion remained after recovery was established.

All causes which predispose to other diseases, congenital malformation, or hereditary taints, & those which exercise a directly pernicious effect upon the lungs or heart, predispose to an attack of Pneumonia. While it is often a sequela of Scarlatina, Rubeola, Variola & Continued Fevers.

An Inaugural Dissertation on the Pathology of Pulmonary Tuberculosis,

Submitted to the examination of the Provost, Regents, and Faculty of Physic, of the University of Maryland, for the Degree of Doctor of Medicine.

By Samuel Jones Minzer, of Maryland.

Anno Domini 1857.

To

George W. Mittenberger, M. D.,

Professor of Materia Medica, Therapeutics and Pathology,

As an

Expression of my high opinion of him as a Teacher,

And

Appreciation of the value of his instructions;

In admiration

Of his deep Professional Knowledge and Scientific Acumen;

And as an acknowledgement

Of the many kindnesses received at his hands,

This Dissertation

Is affectionately inscribed by his grateful pupil,

The Author.

This disease, so merciless, so destructive, so dreaded, like the sirocco of Italy, sweeps over human life, leaving its pathway wet with tears and dotted with graves. It comes with relentless fury, claiming as its victims the young, the most gifted, and the most beautiful of our race, dealing out to man the cup of bitterness and sorrow. When Death instituted Phthisis as one of his means for conquering mankind, he achieved one of his most signal victories, for he seems to have incased it with a covering perfectly impenetrable, alike to the prayers and sorrow of friends, and the admonitions and skill of physicians. It seems to be pitiless. Parents have knelt before it, and in vain plead for their children; sisters have bowed at its iron throne, and with tearful eyes and bleeding hearts besought it to revoke

the mandate which consigned a brother to the grave, but in vain; whole churches, whole nations have been unable to soften its heart of steel, and move it to one deed of mercy and compassion; and even the physician, who, under Heaven is the ministering Angel to ease the sufferings of humanity, to restore health and strength, and to invigorate and prolong life — even his skill and ministrations are defeated and laughed to scorn. But without pausing longer to make any general reflections respecting the fatal and almost hopeless character of the disease, and the sad havoc it produces among the choicest of the human race, I shall proceed at once to inquire into its pathology.

Phthisis means a wasting away, or a consuming; but I shall restrict it to that form of wasting disease, which consists

in the occupation of the lungs by Tubercular matter, and the changes which that matter undergoes and works. The disease, however, is not restricted or confined to the lungs in these cases. "The Pulmonary Phthisis, or deposit of Tubercular matter in the lungs," Dr. Latham observes, "is no more than a fragment of a great constitutional malady." The disease located in the lungs would be sufficient at length to destroy life; but its deadly tendency is assisted and hastened, in the majority of instances, by similar disease, situated in other organs.

Recent pathologists, among whom are Sir James Clarke and Dr. J. Hughes Bennett, have noticed and attempted to prove, with what success a liberal profession must decide, that Phthisis Pulmonalis is ushered in, and accompanied throughout its progress, becoming more and

more violent towards its fatal termination with symptoms characteristic of Dyspepsia and referable to a deranged state of the Primae Viae. Such I have myself observed both in the wards of the Infirmary and out of them. We have a bad, capricious, and uncertain appetite; a furred or morbidly clean tongue, generally the former; a constipated alternating with a relaxed condition of the bowels; unusual acidity of the alimentary canal, with roughness or chapped lips; the latter caused, I presume, by the disordered stomach, as it is a condition generally to be found where that organ is morbidly affected.

The stomach is universally regarded as the great "centre or throne" of sympathies. If its functions are deranged, as in Dyspepsia, the whole system sympathizes; there is not an organ that does not feel its depressing influences;

the blood becomes depraved; serum or liquor sanguinis is thrown out; it forms itself into tubercles in the lungs, and thus Phthisis Pulmonalis is established. Conversely, no irritation can exist any length of time in any organ without the stomach sympathizing or participating; hence, it has been regarded as the "centre or throne" of sympathies. Now, we know the nutritive properties of the blood are entirely dependent on a proper assimilation of food, and, this assimilation being interfered with in all cases where there is a deranged state of the primæ viæ, the continuance of such conditions necessarily induces an impoverished and depraved condition of that fluid, and imperfect growth and disease of the tissues are the results. Under such circumstances, exudations of liquor sanguinis occurring, they are particularly prone to assume the

form of tubercle, and if thrown into the lungs, those changes and that condition of things designated Pulmonary Tuberculosis are there and then produced.

Tubercles, then, or rather tubercular matter, is deposited from the blood. That its formative substance is secreted from the capillary vessels in a fluid form is equally certain; for what other substance than a fluid one, could accomplish the filling up of all the interstices of the tissue in a manner so perfect? The French pathologists tell us a lesion of the nutritive process has its origin in that process and place where the blood, having reached the capillary system of vessels, performs its special purposes. It is in or through the capillaries that the fluids and solids accomplish their vital union. Each solid receives from the blood material particles, identical in their nature with

its own proper substances. It also gives up to the blood, and so diminishes other particles, which have become unfit or superfluous, and which before formed a portion of itself. Now, any departure from this continual reception of healthy and throwing off of unhealthy or superfluous particles; any excess or defect of the particles added, or the particles thrown off; any thing tending to deprave, or impoverish, or in any manner cause a variation from their right consistency, or in their kind and quality; in short, any deviation from the regular and natural process, predisposes to tubercular lyndation, and deposit in the tissues of the body.

Of all the lyndations, tubercular is the lowest. In cancerous, for instance, the blood contains an excess of nutritive materials; in simple, it is normal; in tubercular, there is a deficiency. This being true, it is

self-evident that, if the constitution of the blood determines the lyndations, the causes which produce these lyndations must be sought in those circumstances which operate on the composition of the blood itself. That the healthy nutritive properties of that fluid depend solely upon a proper assimilation of food, and that that assimilation is in all cases interfered with where there is a deranged state of the primæ viæ, thus impoverishing it, I stated early in this disputation, the truth of which is unquestionable. Further, I said that one of the earliest peculiarities of Phthisis Pulmonalis was an excess of acid existing in the alimentary canal. The proof of this consists, not only in the frequent sour taste and acid eructations, but recent pathologists have tested the amount of acidity in the alimentary canal of persons dead of Phthisis, and

comparing it with that which was observed in the bodies of those dead of other diseases, and in all cases there existed a marked difference in the intestinal acidity of the Phthisical bodies and those affected with other lesions.

An excess of acid, renders the albuminous constituents of the food easily soluble; the alkaline secretions of the saliva and of the pancreatic juice are more than neutralized, and rendered incapable either of transforming the carbonaceous constituents of vegetable food into oil, or of so preparing fatty matters introduced into the system, as will render them easily assimilable. "Hence," says Dr. Bennett, "an increased amount of albumen enters the blood, and has been found to exist there by chemical analysis, while fat is largely supplied by the absorption of the adipose tissues of the body, causing

the emaciation which characterizes the disease. In the meanwhile, the lungs become especially liable to local congestions, leading to exudations of an albuminous kind, which is tubercle. This, in its turn, being deficient in the necessary proportion of fatty matter, elementary molecules are not formed so as to constitute nuclei capable of further development into cells; they therefore remain abortive, and constitute tubercle corpuscles. Thus a local disease is added to a constitutional malady, and that compound affection is induced which we call Phthisis Pulmonalis — consisting of symptoms attributable partly to the alimentary canal, and partly to the pulmonary organs. From this reasoning, we conclude that the oily emulsion necessary to constitute a proper chyle to be converted into blood is interfered

with; a depraved state of that fluid is the result, favoring the exudation of tubercular matter into the lungs, and other tissues of the body; thus determining the essential characters of the tubercular diathesis, and the causes to which it owes its prime origin.

There are, however, circumstances or conditions combining to promote and assist the formation and also the development of this diathesis. Hereditary tendency, mode of life, mental and moral conditions, food and drinks, etc., are all predisposing causes of the tubercular diathesis, but of them we have not time to speak. And, indeed, did we speak of them, we might bring them down to the same point — to imperfect digestion and assimilation, or faulty nutrition.

As before stated, tubercle is first deposited in a fluid state from the capillaries,

and in this condition it insinuates itself into the interstices of the pulmonary parenchyma, passes through the lining membrane of the air vesicles, and fills their interior. A tubercle may, in this manner, block up several or twenty of these air vesicles. It there coagulates and constitutes a foreign body, which can only be removed by being again broken down and rendered capable of being expected.

Tubercles themselves are composed of unorganized matter, deposited from depraved blood, of a yellowish or dirty white color, opaque, varying in firmness and consistence from tough cheese to that of cream. We find it soft at one place and hard at another. On cutting, when tough, it presents a smooth, and when soft, a slightly granular surface. On pressure it may be broken up, and formed into a pulpy mass,

but never yields a milky juice. This is what all pathologists agree in regarding as the true tubercular matter. Besides this true and undisputed species of tubercle, however, we often find the lungs studded more or less thickly with a number of "small granules, of firmer consistence, almost as hard as cartilage, semitransparent, and of a bluish gray color." These are called the granulations of Bayle — after the one who first described them — or miliary tubercles, in regard to the nature of which many different opinions have been entertained. Laennec, the Father of auscultation and percussion, regarded them as representing the incipient stage of the opaque yellow substance; hence, he called them nascent tubercles. Andral regarded them as simply some of the pulmonary vesicles rendered solid and hard by chronic inflammation. Dr. Carswell,

who is one of the latest and best authorities, explains their formation in this way; "The membrane lining the air passages secretes from the blood, not only the matter of tubercle, but its own proper fluid; whence it sometimes happens that a dull yellowish point of tubercular matter becomes set, as it were, in a small pellet of gray, tough, semi-transparent mucus." I am not able to say myself, nor do I know that any one has decided it, which is the true theory, but Dr. Watson thinks it probable, that Laennec's doctrine in regard to the relation subsisting between the gray semi-transparent granule and the yellow opaque tubercle, was well founded. The true theory is less practically useful than it is curious and interesting; yet, whatever may be the true theory respecting these little granules, it is very certain that their connection

with the true cheesy tubercle, is very intimate. We rarely find one without the other. They both occur in the same persons, in the same lung, and in the same parts of the same lung.

We are told, that by taking a small fragment of miliary tubercle, and squeezing it between glasses with a drop of water, and examined under a magnifying power of 250 diameters linear, we have presented to us a number of irregular shaped bodies, approaching a round, oval, or triangular form, varying in their longest diameters from the 4000 to the 2000 of an inch. These are called <u>tubercle corpuscles</u>. They are composed of a distinct wall, containing generally three or more granules, without any distinct nucleus, and are mixed with numerous granules and molecules, varying much in size. If we add to these bodies a drop of weak acetic acid, all the

corpuscles become more transparent, but are otherwise unchanged, and many of the granules disappear. Ether and alcohol produce little change. Ammonia partially dissolves the corpuscles, and renders them capable of being easily broken down. They are immediately and completely dissolved in a solution of potash."

Tubercular matter, being once deposited, assumes a variety of forms. It is most frequently deposited on the mucous surface of the vesicles, and of the small bronchial tubes that conduct to them; it occupies, by preference, the upper lobes, and the upper and back part of these lobes; invading, gradually, as the disease advances, the lower lobes, from above downwards. The left lung is oftenest affected, though generally both, at unequal degrees, however.

The ulcerative or destructive tendency of the tubercular lyndation has generally been regarded as its chief characteristic; but its progress is by no means uniform. When once deposited, it may remain, or slumber, as it were, for a longer or shorter period, in its crude state, neither undergoing increase in quantity, nor alteration in consistence. When, however, inflammation sets up around the lynded matter (to be spoken of presently) or in the areolar tissue imprisoned within or between this matter, the whole breaks down; the detritus is conveyed through the bronchial tubes into the trachea, and thence to be expectorated.

Of the process by which this breaking down is accomplished, various theories have been advanced; but that of Dr. Carswell, given to the world within the last few years, is the now generally received opinion, and, to me,

seems the most simple and probable of any advanced. He thinks that the process of softening may go within the tubercular masses at several points at the same time. "The masses," says he, "you must bear in mind, are formed by the growing together of many smaller tubercles; and the areolar tissue, with the other tissues which originally separated these tubercles, still exists, though it ceases to be visible. At length, under the augmenting pressure or some other influence, it suppurates; and in this way the tubercular masses are broken down. Now this is the very process by which tubercles are at length expelled from the body. They increase till the surrounding parts take on inflammation, either from the increasing pressure or from some accidental cause. The inflammation thus excited occurring in persons of the tuberculous or scrofulous

diathesis, has the scrofulous character. The thin pus which it throws out pervades and loosens the tubercular deposit; a process of ulceration goes on in the surrounding textures; and, at last, the softened scrofulous matter is gradually coughed up and expectorated."

By the admirable provision and wise contrivance of a beneficent Being, our frame is always making a spontaneous effort to throw off the chains of disease, and assume its healthy or renovated form; in other words, it is a <u>self-mending</u> machine, and contains within itself the principles of repair, and of conservative adaptation; hence, the propriety of the aphorism <u>vis medicatrix naturae</u> of the older pathologists. Now, upon the principle that there is never an effect without a cause, tubercle itself must be a

pathological epigenesis or morbid product, having as its cause some antecedent diseased action; the natural deduction of which is, the stage of deposition, instead of being the first stage as most authors have it, is in truth the second. This antecedent diseased action is known by symptoms characteristic of dyspepsia, and referable to a deranged state of the primæ viæ, which, in the end, deframes the blood, and debilitates the system, inducing, as has been described in this dissertation, the deposit of tubercles in the lungs; a condition known as Phthisis Pulmonalis, or Pulmonary Tuberculosis.

Knowing, then, that its essential cause is debility, if we can raise the powers of life, improve digestion, enrich the impoverished blood, and strengthen the system, thus preventing the

engendering or calling forth of further tubercular deposit, will not nature effect a cure as well in the lungs, as in scrofulous affections of other organs, which latter we so often see? There is nothing to contra-indicate such an opinion; and, indeed, we have proof that she will. That the deposit of tubercular matter has been spontaneously arrested, even in the worst cases of tubercular lungs, has been seen in the numerous cicatrices and evidences of attempts to heal, found upon post-mortem examinations of those dead of other diseases, who, in some part of their lives, gave unmistakeable signs of disease in those organs.

Repair in the lungs may go on to a happy result in several ways. When bronchae occur singly, without other tubercles or cavities, they may be completely emptied

of the tubercular matter; they may gradually contract, and ultimately become wholly obliterated, only leaving a cicatrix remaining. It is a very rare occurrence to find a cavity existing singly, yet it is sometimes found.

The same conditions being present, the more watery parts of the morbid secretion may be taken up, and the earthy salts it contains may concrete, the whole being converted into a shrivelled, hard, chalky mass, which is sometimes coughed up; sometimes, in favorable cases, remains in the lung for years, an inert and almost harmless mass.

Again, the whole may be converted into a solid calcareous mass, frequently round, sometimes having numerous prolongations and irregularities, accurately fitting the surface and bronchi with which they are in contact. These cretaceous and

calcareous concretions may remain an indefinite time in the parenchyma of the lungs, or may be evacuated with the sputa through the bronchii, the cyst which encloses them then forms a dense linear cicatrix.

Such appear to be the usual modes in which tubercular ulcers heal. If, then, the system be built up, and the further deposit of tubercular matter be arrested, there seems to be no reason why death should not be robbed of his victim. Too often, though, after these processes have gone on to a happy termination, fresh deposit of tubercular matter takes place, until, at length, the number of tubercles, their size, or their effects, become incompatible with the longer continuance of life, and the tottering victim falls into the tomb.

An.
Inaugural Dissertation
On.

Erysipelas.

Submitted for the Examination
of the

Provost, Regents, and Faculty
of the

University of Maryland

For the

Degree of Doctor of Medicine.

By

Charles H. Jordan
of
Virginia

1857.

Erysipelas

If there be any virtue in the antiquity of origin to Erysipelas, that virtue is due as we find from perusing the writings of those learned disciples of Aesculapius who flourished many hundred years ago, that Erysipelas prevailed and from them received the name it now bears. What Erysipelas is, or rather what is the real nature of true Erysipelas has not been definitely settled by writers and Practitioners of Medicine. Some say it belongs to the group of exanthematous diseases, which include Measles and Small Pox and Scarlet Fever; and that like these diseases it is capable, under favorable circumstances, of being communicated from one person to another. Others apart that it is not a contagious disease, but that it is an idiopathic, a Constitutional

affection, characterized by a peculiar spreading inflamation of the skin and vascular network, with fever either preceding, accompanying or following the local disease. The constitutional symptoms which precede the eruption are often identical to those which occur when Intermittent or Remittent fever is about to supervene; for instance we have langour, aching of limbs, pains in the head, chillness, frequent pulse, hot skin and thirst. Sometimes too we have vomiting and occasionally diarrhoea. After these symptoms have prevailed and generally on the second day we may observe a circumscribed redness with swelling appearing on some part of the body, most probably the face of the patient. This redness and swelling gradually increases in size, and sometimes progresses so rapidly, that if the face or the part

affected, the lips and cheeks become enormously distended, and the features are so changed, that the appearance of the patient may be truly horrible. If the finger be pressed on an inflamed part the redness will disappear for the moment, but will return again as soon as the finger is removed. The pain in the part is very considerable, has usually a burning and pricking sensation and is greatly aggravated by pressure. The swollen parts often become oedematous. Serous fluid is effused under the cuticle and then desquamation which is the healthy termination of the disease comes on in about a week. Then the parts return to their natural state, and it is extremely wonderful to see the change Nature ever provident in Her bounties and blessings has effected. Often however when the part which was first affected has

entirely recovered we notice that the Erysipelatous inflamation has gone to another part which is attacked in a manner similar to the first. By this Metastasis or change of place vital parts sometimes become the seat of the disease. The brain for example may be affected. The inflamation may reach it through the nostrils and ethmoidal cells, when a fatal effect is likely to result. It may prove fatal too by affecting the throat, for as the eyelids and lips often become swollen so the tissue of the glottis and Epiglottis may become filled with serum, and the chink of the glottis closing the patient necessarily dies from apnoea. The fever generally continues during the course of the disease, still unless very violent it does not cause serious alarm to the Practitioner

When the subcutaneous tissue becomes inflamed greatly, suppuration and even gangrene sometimes ensues. Pus is discharged through the skin or if the part is gangrenous there exist a fetid purulent discharge and pieces of the dead membrane are cast off. Generally the disease will run its course and terminate favorably in from five to twelve days. And it is only owing to the malignant influence of the case on the previous bad habits of the Patient that it usually opposes good treatment.

In our text books there are mentioned several varieties of Erysipelas, though they are modifications of the principal disease. There are the Phlegmonous Erysipelas, that form in which the inflamation extends deeply into the subcutaneous tissues, is attended with greater

pain and swelling and more severe constitutional symptoms. The cellular membrane suppurates and the pus is likely to burrow and travel from part to part, and cause much mischief; the erratic Erysipelas which is confined almost entirely to the skin travels quickly over the surface of the body, occasing, however, only in one part at a time, and thereby lengthening the duration of the disease, and occasionally by metastasis producing a fatal result; the Erysipelas Oedematodes which occurs when oedematous parts are attacked, as the legs of dropsical patients, and the scrotum. This form can be distinguished readily as the parts pit on pressure, and the skin appears stretched and shining, but not very red. And we have also the gangrenous Erysipelas, which happens to those who are of a depraved and

and ill condition of the system and blood from improper nourishment or intemperate habits. The skin becomes of a livid color; the pain is hot and burning, and when gangrene actually exist, the circulation is suspended in the part, the pain is reduced or entirely vanished, and the temperature of the limb diminished. This form is more dangerous than any of the others mentioned but not so frequent.

We often have Erysipelas from wounds, and in Hospitals this is principally noted, that after an amputation or gun shot wound it will occur and seriously complicate the case. This disease prevailed epidemically in Europe; and no further back than eighteen hundred and forty two or three it was prevalent in many of the states of our union and known by the name of the "black tongue". At

that time it was quite fatal in its devastations; and many died from its effects. There sometimes happens Erysipelas from wounds received whilst dissecting. Here the poison enters the system through an abraded surface and often results seriously. The season of the year in which Erysipelas is most common is Spring and Autumn. No age is exempt from it and one attack will not prevent a second.

The Changes after death depend upon the Cause of death. If from Coma, we have serous effusions into the ventricles of the brain, and arachnoid membrane; and if from Apnoea, the tissues about the Larynx are found filled with fluid and much swollen.

There is much difficulty in ascertaining positively what may be the Cause of many Cases of Erysipelas. Sometimes

it is cold, sometimes stimulating food and drink, fatigue or suppression of an habitual discharge. All however agree that there must be some predisposition constitutionally to the disease, and that those who have it once are likely to become affected again when afflicted by any disease that depraves the system.

It prevails often to such an extent in Hospitals and Infirmaries that we would be led to believe it existed in the air, and any slight scratch or wound would give rise to it. At such times it is exceedingly dangerous to perform any surgical operation, lest those that are operated on may take the disease. From the prevalence of the disease it is believed by some to be contagious, and certainly cases have been reported which show that the opinion

is not improbable — Diagnosis — The In-
flamation of Erysipelas differs from
Common inflamation in several ways,
for instance: it has a disposition to
spread; its boundary is distinct; the pain
burning; and a tendency to gangrene or
sloughing — It is true we may not be
able to distinguish the fever in the
Commencement of the disease, from the
fever of many other diseases, but the
Cutaneous eruption soon will show what
the Cause of the general excitement is —
Two French writers, Chomel and Blache
have asserted that "whenever a Patient
has exhibited for twenty four or forty
eight hours an intense febrile move-
ment, attended with pain, tendernes &
swelling of the lymphatics glands
of the neck we have not hesitated
to announce the approaching development
of Erysipelas, and in no case has the

Diagnosis invalidated the result — Erythema resembles it somewhat, but the part is harder and more swollen in Erysipilas and the boundary more defined. Prognosis The disease generally terminates favorably, And when death occurs it is caused by a Metastasis to the Brain or Heart. In children of a tender age it is likely to produce death, and to the aged, the intemperate and those laboring under or rather just recovering from other diseases we often have the same result.

The Treatment of this disease has given rise to much disputation amongst medical practitioners, some saying it is an inflamatory affection it treatment ought to be met with Bleeding, Mercury, and antimonials — Others say it is a blood poison, that is essentially depressing in its character

and for it we must employ tonics and stimulants, that we must support the system until the disease has passed. Still the majority consider neither of the plans universally safe, that there are circumstances which call for each or either in particular cases. There are some again who think it is like the Exanthematous diseases, Measles and Small Pox, that no medication however judicious cannot cut it short, and that often it would terminate favorably whether medicaments were used or not. The latter is partly true, for in mild cases all that is necessary is rest, saline laxatives and low diet. Could we ascertain that an attack of Erysipelas was about to ensue the first appropriate medicine would be an emetic. The stomach is thereby relieved of its irritating matters, and the liver is roused into

action. Some prefer to effect this latter by a dose of Mercury followed by a brisk Cathartic. The bowels should be kept open during the disease. If when the disease has fairly set in, the pulse be full and strong, the inflamation severe and threatening, Blood may be taken from the arm; and if there be any stupor or local excitement about the head Cups or leeches may be employed in that region. Then we may give Cooling diaphoretics as Citrate Potass; Neutral Mixture or acetate of Ammonia. Soon however it will be noticed that debility is about to ensue. The Patient begins to feel weak and depressed and we must resort to tonics and Stimulants, Quinine, ammonia, wine animal broths &c, must be used.

Foreign Practitioners have given their testimony in favor of Sulphate Quinia

principally; but while it is acknowledged to be excellent, still there is another tonic that should receive its share of praise. I refer to the ammoniated tincture of Iron. I have seen it tried often in the Infirmary attached to this Institution and never known it fail. I have heard his one of our Professors say that he has used it almost entirely in private as well as Hospital practice and never has he seen a case result unfavorably in which the Tinc of the Ammoniate of Iron was given at the first indication of depression from the disease and continued in free and frequent doses. The quantity usually given is twenty or thirty drops every three hours.

The local treatment is sometimes of much benefit if used properly, by it we may check the disease in its migrations and alleviate the uneasiness it may

Cause the sufferer. To prevent its spreading Nitrate of Silver or Zinc of Iodine are chiefly used. The part affected is circumscribed with a strong solution Argenti Nitras or Zinci Iodine.

To relieve the pain we may use some bland mucilage as Infusion Slippery Elm bark or Opium wash. If the Inflamation has extended beneath the fasciae and pus is formed then it will be necessary to make incisions to discharge the matter and then employ soothing poultices.

Although this disease is a repulsive one at first thought, still we are assured that like the afflictive dispensations of Heaven it often has a benign influence, It has cured Impetigo, Psoriasis and many other cutaneous afflictions which have resisted treatment. Let us then not exclaim against providence but remember that He does nothing unwisely.

A

Clinical Report,

Submitted to the Examination,

Of the

Provost, Regents, and Faculty

Of Physic,

Of the University of Maryland,

For the Degree of

Doctor of Medicine.

By

William Charles Nichols,

Of

Alabama.

A. D., 1857.

Clinical experience is indispensable to the successful practice of medicine. The student may learn "all the jargon of the schools"; tax memory with a long list of classifications and definitions; yet, when first at the bedside, he will find himself bewildered by the endless variations of disease, produced by some idiosyncrasy, or complicating cause. The diagnosis is shrouded in doubt; his prognosis fails; and his treatment is wholly unsatisfactory:- some patients recovering, when his gloomy and pronounced ill forebodings; others dying, of whose recovery he expressed the most sanguine hopes. In the diagnosis of the simplest malady, he finds a hidden labyrinth to gather on; and in its termination, a dark problem to solve.

His ideas of a pneumonia, a phthisis, or a val-

vular disease, as gained from books, are vague and indefinite. No language however, however nice one, can convey a just notion of the slight graded or distinction between a vesicular breathing and a pueri-lity; or between a crepitant and subcrepitant rhonchus. They have their own vernacular; their own idiom; - and no tongue can interpret; - no invention of man however cunningly devised, - can declare their true meaning and varied intonation.

In fine - of facts, altered structure and morbid changes are revealed by clinical research. It is, moreover, the crucible in which we try the value of the collateral and contributory sciences.

It is too often the fault that clinical medicine is only gained by casual experience, when it should be the ground-work of practice. If the student neglects this starting point, he must either seek it

of the expense of bad practice, or resort to empiricism. He must then read for himself the history of disease in the shrunken features, languid eye, gesture, or decubitus of his patient; for there is a rich mine of diagnosis in the physiognomical expressions of the human face, but no man can write them;—an artist may paint, but no printer can print them; he that would possess the wealth of such treasures, must dig for them himself in the clinical mine."

Having then a due appreciation of the value of clinical observation, we have collected a report of the annexed cases of disease as occurring in the wards of the Baltimore Infirmary.

List of Cases.

Pituitous Obstruction.

Albuminuria.

Pneumonia.

Chronic Diarrhœa.

Congestion.

Malaria & Intermittent Fever.

Pleuritis.

Mary, a servant girl, ten years of age, came to the Infirmary, May 9th, 1[illegible]. She had been sick three weeks.

On being questioned in regard to her health previous to the present attack of illness, she stated that she had been free from any ailment, and had been actively employed in the duties of a house-servant. Her first symptoms of illness came on after exposure to cold during the variable weather of April. She was taken with chill, followed by general Excitement and severe pain in the right side just beneath the mamma. The fever and fever were of short duration:- not continuing more than three or four days. During this incipient stage, her symptoms were of such a character as not to demand the attendance of a physician. She was given by her mistress, such simple remedies, as tradition, and the treatment of the many minor ills that befall a large family, had established as infallible panaceas.

Despite, however, apparent convalescence, she always became fatigued and breathless on making the slightest exertion. Sweat was ever visiting prior to admission into the wards.

When this patient was first examined, on the 10th May, there was manifest on mere inspection some thoracic trouble. Her respiration was difficult, slow and jerking;- her alae nasi worked vehemently;- her chest did not expand equally;- and to the care of observer, there was evidently some vital organ affected;- thus prevented from performing its normal function, and calling for relief, in the suffocative breath and half-developed cough.

On close inspection, it was found that the left moiety of the chest did not expand on inspiration;- and the intercostal spaces of that side were prominent and resistent to pressure. During a forced inspiration, the ribs of the left side did not move freely one upon the other,

as they are wont to do in the normal expansion of the healthy thorax. The whole of that side moved, as if the ribs were continuous; and formed but one firm mass;- and, on making a differential admeasurement, it was observed to be nearly one half inch larger than the opposite side. The natural resiliency was here lost to percussion; showing that beneath the stricken part, there was no longer an elastic yielding body. The sound elicited was dull;- it was high dulling from apex, to base. The hand applied to the ~~[illegible]~~ chest did not receive, when the patient was made to speak, the usual vibratory thrill given out by the healthy lung;- and, this phenomenon of disease strongly contrasted with the gentle tremor communicated to the hand when placed upon the opposite side. Here then were grounds for suspecting the existence of a non-conducting material more averse to sound than the imperfectly conducting lung.

Succussation gave unmistakable evidence of bronchial breathing and bronchial voice beneath the left clavicle; - and the latter sound was so loud as almost to deceive one into the belief that it resembled pectoriloquy; a sign ominous of a serious malady. The ear pressed against the opposite side of the chest, did not receive the gentle, soft murmur of health, but something more than this; - it was the louder, harsher, troubled breathing of an organ forced to do more than nature intended; - it was the rapid, rushing, puerile murmur. Moreover, no sign of hoarseness was heard upon the diseased side; - for the cheerful cavity no longer permitted wavelets to be sent off from the vibrating bronchi, to change and alter sounds by checking against the firm opposing wall of the costal pleura.

In this patient, the decubitus was toward the left side; and when questioned in refer-

ence to this fact, she replied that reclining on the right side gave a sense of weight and suffocation.

The heart, also, was displaced. Instead of lying in its usual place beneath the left mamma, it was carried to a corresponding site on the right side. It was not only heard and felt to pulsate in its new position, but it was seen to thrust, out, at each receiving impulse, the adjacent intercostal space; and its feeble beatings and irregular action declared its weary of its new abode.

In this case, there was evidently some unyielding body occupying the place of the spongy, healthy lung. It could not be the consolidation of Pneumonia, nor the tubercular deposit of Phthisis;- for no fremitus was given on palpation. There were no crepitant, nor mucous rhonchi;- there were no bronchial breathing, nor bronchial voice, save just beneath the clavi.

cle;- and here percussion gave a comparatively clearer sound than at a more depending point. Besides, the ringing cough; the hectic fever, and colliquative sweats; the glaring, sunken eye, and emaciated cheek; all, so characteristic of the consumptive germ, were entirely absent.

The cough of this patient, was short, dry and harsh; and failed to bring up from the branching tubes and delicate air cells, either the rust-colored, or prune-juice sputa of Pneumonia, or the nummular sputa of Phthisis.

Thus then, we have secluded three more formidable diseases. While the high located heart; the non-tympanitic chest; the dull sound elicited on percussion;- and the decubitus toward the side fettered by disease,- all have indicated that the pleural sac was filled with effused serum. The position, also, of the lung beneath the clavicle, as shown by the bronchial

breathing and voice, led to the fearful supposition, that the breathing apparatus was probably not only crippled in its functions for the present, but that it was irrecoverably injured by adhering bands of lymph. This result of acute inflammation was certainly to be dreaded, when the age of the patient was taken into consideration; - for in youth, the plastic materials of the blood are more abundant, and more readily organizable than in adult life. Did we, in this supposition, include the true nature of the case; - if the lung be chained down by lymph; carnified by pressure; and prevented from again resuming its normal place; - we might fear the ultimate loss of an organ indispensable to life. This will be noticed in the sequel.

The treat. ent obviously indicated, was, to promote the absorption of the effused fluid. The period for active measures had now passed. There was no heat of surface, or any other sign of inflammatory excitement. The

pulse had lost its hardness, and was now frequent, soft and compressible. Blood letting, so important at an earlier period, would have been injurious. The object being to arrest further effusion, and to hasten the removal of that already deposited, it was found necessary to so improve and modify the nutritive functions, as to cause a radical change. Here, then was afforded an opportunity for triumphs in the sorbefacient powers of mercury. Alterative doses of this drug, continued until its constitutional effects were evident, were relied on to effect restorative action. The following formula was therefore ordered:-

℞ Hydrarg. Pilul. grs xiv
Ext. Hyoscy. grs iij
Pulv. Ipecac. grs ij.
M. Ft. pil iij Pilul. Dosis, one, ter die.

Stimulating aliment, and all causes calculated to give birth to febrile irritation, were to be rejected.

This patient was closely watched from day to day; and very soon a change, indicative of approaching convalescence, was manifest. The dullness on percussion gradually yielded to a clearer sound. The right-sided lung slowly expanding, was heard to occupy a larger portion of the chest. It thus seemed to break away from its fastenings, eager to fulfill its proper functions, to the great relief of its murmuring companions. The heart, too, began to leave its new resting-place; and was observed to advance, step by step, towards the sternum; and then, emerging from beneath that bony arch, to resume its normal pulsations.

Such was the salutary change, that on the 1st June, a vesicular murmur was evident over the whole of the left half of the chest; not as distinct

and smooth, however, as the mouth of health. but it was sufficiently audible to prove that the lungs had been restored to its proper, healthy, pulsation and been congested; and the mercury was discontinued.

On the 5th June, she was directed to take potass. Iodid. gr. iij three times daily. She was permitted to leave the house, June 15th. At this time, her respiration was normal; her pulse had resumed its natural, equable strength; and though little emaciated, she was in consummate health.

Albuminaria.

Sallie, a negro woman, thirty years of age, entered the Baltimore Infirmary, May 14th, 1856.

She had, during the previous winter borne a child, and while confined to the lying-in room, the fatal malady, for the relief of which she entered the house, made its onset. She stated, that during gestation, she had pain in the loins; difficult micturition; and swelling of the lower extremities. After parturition, this oedema of the legs disappeared; and all irritation about the urinary organs was calmed. This event is, we believe, not an unusual occurrence in the history of the parturient female.

About three weeks after the birth of her child, this patient was unwittingly exposed to

cold, which gave her fever with severe pain in the loins. Within a few days after this indiscretion, she suffered all the discomforts of an immensely distended abdomen. Her urine was now scanty, frothy, and high colored; and although medical attendance was secured, her untoward symptoms were unrelieved. Thus, while her strength failed, her disease gave greater distress to the flagging powers of life.

Such was our patient's unfavorable history before admission to the ward of the hospital. When first examined, her condition was evidently hopeless. She presented a unique map of disease. The greatly distended abdomen; the elevated head, and staring eyes; the short, quick, asthmatic respiration; the extremities, timely swollen, pitting on pressure,

and doughy to the touch; - and in anemic, sodden aspect, - were all suggestive of some important structural lesion. Her pulse was quick and feeble; - and her urine was scanty and turbid.

The history and peculiar, inexpressible appearance of this patient; - and, also, bearing in mind the frequent connection between chronic dropsy and organic renal change, - led us to subject the urine such tests as chemistry affords as infallible guides to the diagnosis of that formidable malady, - Bright's kidney. To effect our purpose, heat and nitric acid were chosen; - since the use of these agents involved no profound chemical knowledge. On placing the test-tube, containing a small quantity of urine, over the flame of the spirit-lamp,

we observed that as the temperature of the fluid began to rise, a thick, flaky, precipitate was deposited. This arose a suspicion, that the urine of this woman was strongly impregnated with albumen. Yet knowing that heat alone was fallacious as a test, - that it precipitated certain of the phosphates as well as albumen, we were led to apply the complimentary test, nitric acid; which would hold in solution the phosphates, while it still retained the albumen precipitated. This test being adopted, the urine presented the same unmistakable evidence of Bright's disease.

The causes of albuminous impregnation are various; - and the conclusions deducible from the occurrence of this phenomenon in any instance,

must be estimated by a knowledge and just appreciation of the causes. Indigestion and many stages of irritation, may originate albuminous excretion from the kidney; and, in many instances, the consequences may be as trivial as the cause is transitory. And, therefore, the persistence of the abnormal condition, together with the sequelæ, must always be considered in determining the prognosis of any individual case.

In the present instance, it was evident that remedial measures could do little more than mitigate urgent symptoms. Such was the probable disorganization of the kidneys, that their restoration to a healthy condition would be impossible. The distress from the effusion was almost ~~incredible~~ indescribable. The prepuce

of the diaphragm upwards so as to impede the circulation and respiration, so to render a recumbent posture impossible; - and the pulmonary congestion originating in the same mechanical cause, gave rise to pulmonary hæmorrhagic.

The most natural means of treatment indicated, were to promote the removal of the effusion by the aid of cathartics; and at the same time to use some tonic agent to sustain the ebbing powers of life. It would have been unavailing to have recourse to diaphoretics; for the consequent depression would have counteracted any remedial influence. Diuretics would have promoted no good end; - for the small amount of healthy blood was already overtaxed; and the addition of any stimulant would have increased congestion. She was ordered:-

℞ Pulv. Jalap. Comp. ʒ ss. – Twice daily.
Also, as a mild tonic and alterative, ℞
Liq. Ferri Perchlor. gtts xv. – Three times daily.
On the 19th, she was found unrelieved.
Haemoptysis continued. At this time, such
was her dread of impending suffocation,
that she begged to be supported in the
semirecumbent posture. To day, she was
ordered:– Pulv. Jalap. Comp. ʒ j. – Twice
daily.
May 23rd. Finding now no mitigation of
symptoms, the measures hitherto pursued were
now withdrawn; and this formula was given:–

℞ – Scillae Pulv. ʒ j.
Acaciae " gr j
Digital. Pulv. gr v.

M. Ft. – xxx Pilul. – Dose, one every six hrs.

She died, May 25th. Delirium supervened

during the last few days, preceding her death. This unfavorable symptom was, no doubt, attributable, in part, to pressure from effusion in the cerebral ventricles, but mainly to the impregnation of the blood with urea.

On examining this patient after death, the serous cavities, and areolar tissue in all parts of the body, were found gorged with serum. The kidneys were soft, flabby and enlarged. Their exterior presented a marbled appearance; and on making an incision into their substance, the cortical or secreting portion of these glands was found broader, and more vascular than that condition pertaining to health. A large ovarian tumor was also found in the abdominal cavity.

The most plausible explanation of the

causes of our patient's illness, as deduced from post mortem appearances, resolves itself into this:- the ovarian tumor and gravid uterus making pressure on the vena cava and emulgent veins, produced congestion of the kidneys and lower extremities;- and the ascites and oedema of the legs were consequent on the impeded circulation. The removal of a part of the disturbing cause, in the birth of the child, relieved the congestion, and, also, the results of that condition. But there was, however, implanted the germ of disease, prepared at any time to give rise to an incurable malady. Exposure, in this case, to the vicissitudes of wintry weather, was sufficient to throw the mass of an attack on the already irritated kidneys; and, being thus urged to

a task too great for their crippled functions, the kidneys secreting glands of the chief emunctories of the body was destroyed.

Pneumonia.

J. Whatstine, a laborer, twenty three years of age, was attacked on the 19th May, 1856, with high inflammatory fever, headache, and pain in the left side. He entered the Infirmary three days after the beginning of his illness.

When first seen at the hospital, his symptoms were of such a character as to lead to the supposition that he labored under pulmonary disease. The flushed cheek, difficult and rapid breathing, elicited from an experienced attending physician, on entering the ward, the exclamation: "What have we, - a case of Pneumonia"?

On examining his chest, the posterior part of the left side yielded to percussion a dull

sound; and fremitus was increased in distinctness. The breathing of this patient gave the altered sounds of disease; for the vesicular murmur of health was absent; and in its stead, the air was heard rushing through the bronchia. The voice and cough, also, were given with more distinct emphasis to the listening ear. The minute vesicles no longer pervious to air, failed to produce the sounds of health. They were obstructed either by effusion within their cavities, or were emphysed by the products of inflammation from without.

Here was evidently the second stage of the active inflammatory disease, Pneumonia. The congestive stage was no longer present; for the minute crepitating rhonchi so sig-

nificant in their language were gone, - only to return, however, well-nigh hearth in louder accents.

On applying the ear to the left side, we found, near the lower part posteriorly, that vesicular breathing was heard; and in lieu of it, was heard crepitant rales, so the air was freely forced into compressed bronchi. Percussion gave no positive evidence of disease. The upper lobes of both lungs labored to supply the deficiency occasioned by the crippled condition of their assistant.

The general symptoms of this patient were ominous. His pulse was rapid and full, being 116 per minute, and his breathing was frequent and difficult, - being 40

per minute.

The treatment of a disease so markedly inflammatory, and so rapid in its course, as Pneumonia, must necessarily be promptly antiphlogistic. More blood is sent to the congested lung than its healthy portion can duly decarbonize. This has a tendency to increase engorgement, and to accelerate the destructive process. But by diminishing the amount of vital fluid, we can relieve the labouring healthy portion of lung of its incubus; and we can also impede the tendency to the effusion of lymph; and we can promote, in a great degree, the absorption of that already poured out. Blood-letting, consequently, is of peculiar efficacy in Pneumonia; - and, in the present instance,

it had been judiciously resorted to before the patient entered the hospital. As this pulse, however, was full and frequent, and as the inflammation was still unabated, he was ordered to be cupped over the sides of the chest.

The object, also, being to prevent the further exudation of lymph, which, instead of, partaking of an adhesive, or organizable character, would have become rapidly suppurative, mercury as valuable in all affections marked by strenuous inflammation, was ordered in the following formula:-

℞ Hydr. Submur. grs xij
Pulv. Ipecac. grs iv
Pulv. Opii grj
M. ft. viij Pilul. Dose, one every 3 hours.

On the following day, May 23rd, ~~this~~ patient was found much improved. His pulse and respiration had now lost their undue frequency, the one being 110, the other 28 per minute. The left side continued dull on percussion; and bronchial breathing and bronchophony were still audible. The right side yielded a comparatively clear sound; though it was not the elastic, resonant sound elicited from the chest in health.

On the 24th, as the mercury seemed to irritate his bowels, his symptoms were not so favorable. The stroke of his pulse was 106; his respiration 32 per minute. So all inflammatory fever appeared now subdued, he was ordered a blistered over the left side.

May 25th. This patient was still improving. His pulse was again 100; his respiration 30. As diarrhoea persisted, he was directed Tinct. Opii. ℥ss. pro re nata, until the intestinal irritation should cease.

May 28th. Three days had now elapsed since the last visit to our patient. He was formerly rapidly recovering his health. His respiration was now nearly at its normal standard; and his pulse was reduced to 80 strokes per minute. The narcotic having produced the desired effect, as shown by slight ptyalism, was discontinued. Convalescence being now established, this patient was, in a short time, enabled to leave the hospital.

The rapid recovery of this patient from such extensive disease of a vital organ,

was very remarkable. This sudden change is a surprising feature of Pneumonia. At one time, we have evidence of the greatest prostration; and so soon as the severity of symptoms are mitigated, the strength and vigor of health quickly return,—convalescence being rarely protracted.

In this case, the changes in the lungs, as shown by auscultation, were closely observed. As convalescence took place, the bronchial breathing and voice were left distinctly heard on the left side. In their stead, were found returning crepitant rhonchi, louder and more prolonged, than the sounds diagnostic of incipient Pneumonia. These signs of disease became less and less evident as the measures adopted exerted their beneficial influence.

nce. Moreover, percussion gave a clearer sound; and, finally, there were no symptoms of disease, save an occasional crepitation after forced inspiration.

The changes in the right lung were equally indicative of approaching health. The vesicular murmur, which had been diminished, and nearly obscured by the minute crepitations, became again more manifest; whilst the crackling bubbles decreased in volume. These salutary alterations continued as absorption took place, till they ushered in a favorable termination.

Chronic Dysentery.

Michael Scallion, a laborer, twenty five years of age, came to the Infirmary on the 12th Sept., 1864. He had long suffered from occasional attacks of malarious fever; and for the relief of this trouble, he was urged to take the "Indian Vegetable Pills," a noxious compound vended in every community by a ruthless horde of impostors; who, in order to drive to themselves the luxuries of life, deal out their poisonous draughts to the unwitting and confiding; robbing existence of its pleasures; and inflaming in the most robust frame the germs of decay.

Thus it was with poor Michael! He left "sweet Erin" with visions of wealth in a new home; where, freed from the vigilance of a legal min-

ions, he could roam unmolested,- save, perchance, when greeted by the taunts of distrustful "Sam". But unsuspecting "Milk" found in "Indian Vegetable", a friend far more intolerable than the buffetings of young America; for this expected emeodes was the disturbing cause of much intestinal trouble. Dose after dose, and purge after purge, were taken, and this was pronounced by the pill-box gentry a most favorable termination to the existing malady.

Thus seduced into the belief that active purgation was his only hope, our deluded sufferer, whilst freed from one disease, brought in its cure another more surely fatal. The acrid properties of the drugs swallowed, were so irritating to the engorged intestinal surface, that an intractable dysentery supervened.

And such an event was to be expected. The morbid condition following the malaria, was congestion of certain of the abdominal viscera; and an engorged state of these glandular organs, would necessarily tend to produce a remora of blood in the mesenteric vessels that return the circulating fluid into the vena cava. Under such circumstances, therefore, an irritant applied to the mucous membrane of the bowels, would certainly engraft active inflammation. This evidently was the explanation to be given of our patient's condition.

When this patient was first examined by the attending physician, his stools were frequent, bloody, mucoid, and attended with much tenesmus. His tongue was coated; and his pulse was soft, small, and quick. There was

also, much tenderness along the track of the large intestines.

Days were had now elapsed, since the beginning of the dysentery; and all symptoms of acute sthenic inflammation had passed. The opportunity for blood letting, an important measure in the incipient stage of all abdominal affections, if it had been indicated, was permitted to pass unappreciated. The vital powers were much depressed; and the severe pain and incessant purgation were ushering in speedy dissolution.

The indications for treatment, in this case, were the use of such astringents and anodynes as would relieve pain, restrain purgation, and add tonic properties. This object could be accomplished by the mineral astringents. He prescribed the formula:-

℞ – Argent. nitrat. gr. xij
Pulv. Opii. gr. vj
Ext. Gentian. gr. xxiv

M. Ft. xij Pilul. – Dose, one every 3 Hours.

Sept. 16th. – There was no appreciable improvement in his symptoms. A few scybalae being found in the bed-pan, it was thought that the dysentery was probably depending on irritating matters in the intestinal canal. He was given the following mild aperient guarded by an anodyne:–

℞ Ol. Olivi. ℥j
Tinct. Opii gtts xv.

M. – To be taken at once.

In an hour, after the action of the aperient, were passed so much faecal matter, it was explained that the inflammation was circumscribed and situated in the lower part of the large in-

testines. Under such a supposition, the following astringent injection was ordered with hopes of benefit: ℞ Zinci Sulph. ʒj

Rect. Cfni gtt xL.

Aquae ℥ij.

S. To be given with little starch water warm.

Believing at the same time, that there was a want of proper innervation of the bowels, and an absence of due relation between the expulsive force of the colon and its contents, it was deemed expedient to give such a nervous stimulant as would restore the lost power. This formula was then directed:-

℞ Ext. Nux Vomica - grs viij

Aq. Ext. Cfni ... ℥ iv.

M. - F. h. viij Pilul. - Dose, one every 4 Hours.

Oct. 1st. - The above treatment was continued until the ~~xxx~~

present date. To day, he was seen by the Prof. of Practice. His symptoms were not ameliorated. All previous treatment was withdrawn; and the following was ordered:- ℞ Cupri Sulph.

Pulv. Opii āā gr ½

Fiat Pilul. - To be repeated every 4 hours.

This salt of copper is thought to possess not only an astringent and tonic influence, but also, to exert an alterative action on the ulcerated surfaces. As he complained of much tenesmus, he was ordered the following, after each evacuation:-

℞ - Aqua Prep. ℥ij

Ext. Hamamelis ℥ij

Tinct. Opii - ℥i

Aq. Cinnamon - ℥i

Aq. distillat. ℥iij

M. - Fiat Solut. - Dose, tablespoonful.

He was also given an injection of Dilut. Opium gtts xx, Starch water ℥ij. to be administered after each dejection.

Oct. 27th. – Very little relief was derived from the previous judicious course. The evacuations however were not so frequent. The pills of Opt. Ipec and Opium were continued. So much benefit is to be gained from an absolute diet in the treatment of chronic intestinal diseases, this patient was restricted to one pint lime water and two pints milk. In lieu of the Chalk Mixture, he was directed this solution:-

℞ Gallae Pulv. Oppt. ℥ij
~~Pulv. Cinnamon.~~ ℥ij
Aq. ferventis – ℔j
M. Fiat Mist. Dose, ℥ij after each dejection, combining it with a teaspoonful of Jamaica.

Oct. 29th. Tenesmus and frequent stools continue. As no benefit was derived from the last solution, it was withdrawn. This night no opium was given. The compound was ordered, being astringent and anodyne in character:-

℞ Ext. Catechu - ʒij
Pulv. Opii - ʒi
Sacch. Alb. āā
Mucil. Amylum ʒi
Aquae - ℥ij

M. - Dose, tablespoonful after each evacuation.

Nov. 1st. We find the following note made by in relation to this patient. "Internal incisions continue virgin. Very good operating place since October yesterday. Proceed with iron drip and the cheap diet."

Nov. 9th – As this patient had improved markedly under the seven regimen adopted, it was deemed advisable to substitute a more nutritive diet. He was ordered at dinner a teaspoonful of oleo-margarine.

Nov. 26th – Weight was compared today. This was thought due to the free use of oleo. They were discontinued; and this formula was added:– ℞ Chlorid. Acet. grviij

Aqua Q.s. ad. ℥ j.

M. – Sig. Take a teaspoonful three times daily.

No evident change had now taken place in the patient's health. He had gained sufficient strength to leave his bed and go into the adjoining ward. Elated with hopes of returning health, he was incautiously, on 4th Oct., exposed ~~[illegible]~~ to cold by bathing his feet in cold water. This imprudence

tongue on account of Pneumonia. His breathing was hurried and difficult. Auscultation revealed all the signs of universal Bronchitis. All previous treatment was now withdrawn, and the following stimulating expectorant was ordered:-

℞ Ceanothus Fol.
Senegae Rad. āā ℥ij
Vinum Ferrum ℃j
S. Dose, ℥ij every 2 hours.

The condition of this patient was now hopeless. His vital powers were incapable of resisting the ravages of such extensive disease. He died on the 10th Nov.

We were permitted to examine the contents of the abdominal cavity. The colon and rectum were found extensively diseased. The walls of these viscera were thickened, and their mucous mem-

brain was entirely destroyed by ulceration. There was no disease of the small intestines. The lungs were not examined.

Erysipelas.

Martin Tighe, a laborer, eighteen years of age, was admitted into the Infirmary, March 1st, 1856. He had been sick of dropsy two weeks before his entrance into the house. He had recently arrived in this country from Ireland, - was long on a sailing board, - and consequently suffered some impairment of health. After reaching America, he set about the labors of a farm servant in a malarious district. His weakened condition predisposed him to the

inception of the malarious poison; and during the autumn previous to his entrance into the hospital, he was long ill of intermittent fever. As winter approached, he was freed from his discomforts to be again attacked on the return of spring.

When he came to the Infirmary, he was pale and anaemic; his face was swollen; his abdomen was distended with effusion; and his legs were oedematous. This state of health was evidently the sequelae of malaria. A mercurial cathartic was given; and the following tonic and antiperiodic course was adopted:-

℞ Cinch. Sulph. grs.
Ferri Sulph. grij
M. Ft. Chart. - S. Pobe repeated every Four Hours.

The above course was pursued until March 7th. During this time, he had no return of the intermittent parox-

yem. The dropsical accumulation still continuing, it was deemed appropriate to stimulate the absorption of this fluid. The following was given:-

℞ Magn. Sulph. ℥ss
Potass. Bitart. ℥ss
Colch. Pinch. ℥ss
Aquae ℥viij

M. Dt. Solut. Dose, ℥ss every 4 hours.

March 10th. - All symptoms of Malaria and its sequelae, had now disappeared, and it was thought, that under proper regimen, and a judicious tonic course, our patient would soon be restored to his accustomed health. Complaining, however, being made of tenderness about the right foot, it was found on examination to be slightly swollen, and covered with a diffuse erysipelatous blush. The exciting cause of this distress seemed to have been a tack that had accidentally

pricked the sole of the foot.

Erysipelas not unfrequently supervenes on dropsies and malarious fevers. In point of fact, anything that depraves the blood and debilitates the system, tends to augment the susceptibility to erysipelas. Predisposed to the inception of disease, and brought within an atmosphere tainted by a poison undoubtedly contagious, our patient was liable to be attacked, as soon as any irritant should cause the slightest constitutional disturbance.

The medicine hitherto given was withdrawn; and the following was ordered:- ℞ Tinct. Ferri Chlorid. gtts xv. S- To be taken every two hours. Also, as a local application, ℞ Ferri Sulph. ʒij, Liquae - Cerij. These preparations of Iron are believed by many to exert a specific influence over erysipelas.

March 11th - This patient was quite ill to day. The con-

stitutional symptoms that presented yesterday a severe character, had now quickly assumed a typhoid type. His pulse was soft and frequent;— his skin hot and dry. In addition to previous treatment, he was given:—

℞ Quinine Sulph. ʒij.
Ferri Sulph. gr xv.
Magn. Sulph. ℥ij
Aquae — ℥vj.

M. Sol. Dose, tablespoonful to be taken every 2 hours.

March 22nd. The symptoms indicated no improvement. Large bullae were found on the leg and dorsum of the foot. These were, from time to time, freed of their serous content. The abrasions showed a disposition to ulcerate. The swelling had now extended as far as the knee. The remedies previously instituted were continued.

March 13th. There were indications of improvement in the inflamed parts. But a profuse diarrhœa supervening, all treatment, excepting the preparations of iron, was suspended. The following tonic and astringent course was adopted:-

℞ Quinia Sulph. ℥ss
Tannic Acid. ʒj
Aq. Camph. ℥ iv.
M. Dis. Solut. — Dose, tablespoonful every 2 hours. Nutritious diet was also recommended.

March 19th. There was improvement in both local and constitutional symptoms. Slight diarrhœa still continuing, he was ordered the oxycinnamic acid mixture, prone nota. The nitrate of silver to the ulcers was suspended; and Talbot's lime-water was ordered to be dusted over their surface. The following stimulating ointment was directed as a dressing:-

℞ Cerat. Resinæ ℥ij

Ol. Terebinth. ʒ ß

Pulv. Glycer. ℥ß

March 19th. The swelling and inflammation of the foot had subsided. The general condition of the patient had improved.

March 21st. A large area of varicose grooved in the subcutaneous areolar tissue midway the leg, began to show a profuse suppuration. Previous treatment was suspended. The following was directed:- Locally: a large poultice to the abscess: internally:-

℞ Pinet. Gemch. ℥iß

Sulph. Acid. Aromat. ʒß

M. Ft. - Dose, tablespoonful every 3 hours in a strong infusion of gentian.

March 24th. Complaint was made of the right hand and arm. This extremity was swollen. The

cervical and axillary glands of this side were enlarged.

March 27th. To day the uvula presented a healthy appearance. The catapiasm was discontinued, and the application directed:-

℞ Cerat. lenitiv. ℥j
Iodini. gr xv
Potass. Iodid. ℥ß

The great quantity of effusion in the hand and arm, was removed by the use of the accupuncture needle.

April 8th.- This patient, so much weakened by disease, was now convalescent. All unfavorable symptoms having now disappeared, there was every hope that we would be able to leave the house in a short time.

Here was evidently a case ~~depend~~ of great debility depending on a fault of constitution. The judicious

tonic course of treatment employed, was the only rational plan: the object being, to sustain the system, and, to give such a fillip to the sinking vital energy as to enable it to eliminate the poison that was about to change you from manhood.

The Interim Splint.

In the treatment of fractures and diseases of the lower extremities, surgical skill and human ingenuity have been at all times, puzzled, and often baffled in attempts to devise such instruments, as might fulfill every indication. The thought is at once suggested, when we consider the various appliances that have, from time to time, been proposed. Each surgeon has need his own favor-

its apparatus; and as one has [illegible] to satisfy the mind of the medical profession, that any single instrument has been free from faults. Nearly all the instruments in use are complicated and costly, and are thus placed beyond the reach of the general practitioner. In their construction, the beauty of simplicity seemed to have been forgotten, and in this way, massive and clumsy splints have been introduced into practice.

In the treatment of fractures, we want an instrument simple in construction; easy of adaptation; and above all, a portable instrument. It must restrain the fractured bones; favor coaptation; and supersede the office of the broken fragments, until reparation has taken place. All tendency to displacement must be obviated; the supports must be equable; offending muscles must be relaxed; and such rest

and position must be maintained, as to have prevent the least irritation. These several important indications are fulfilled in an eminent degree by the splint recently introduced, by Dr. [illegible] of Cincinnati, in the treatment of fracture of the femur. It is simplicity itself, and the ease with which it can be adjusted to the fractured limb, render it an invaluable instrument in the hands of the mere tyro in surgery. It facilitates convalescence, by permitting an elevated posture, so as to prevent any undue afflux of blood to the injured part. Sufficient extension can be made to restore the fractured extremities of the bones in a position, overcome muscular rigidity, and add to the ease and comfort of the patient, by allowing gradual changes of posture without disturbance of the fracture.

This apparatus consists of an angular splint, with a supporting board, wooden, and bandage. It can be carved from wood, or made of iron wire; the wire being the better material, as its lightness and pliability render it easily carried. It is adjacent to the anterior aspect of the limb, by means of a piece of adhesive strip, fixed in a suitable position. The limb is first raised from the bed, having one thigh gently placed on the pelvis, and the leg on the thigh. The apparatus is now supported by means of the wooden board; and we then determine whether the burden of the limb is proportionably distributed to each of the adhesive strips. Having now adjusted the splint, the roller is to be applied, and so on towards the bandage, which will prevent injury from the wire.

The utility of this apparatus is best seen in a

treatment of compound injuries of the tibia and fibula. It permits the frequent ablution and cleansing of the wound, and the ready application of such dressings as the case may demand. Gun shot injuries involving the bones of the leg, have been successfully treated by the splint. It was found an invaluable agent in rescuing from the knife accidents of this nature, that occurred in the late election riots of our city.

We have seen several cases of fracture of the femur treated in this splint. It must rely upon the obliquity of the cord to maintain the requisite extension, in order to prevent lapping of the fragments of bone; and upon the equable pressure of the roller to overcome either lateral or downward displacement.

We have found this splint well adapted to

diseases of the hip-joint, where rest and position were requisite to obviate either spontaneous or unavoidable motion of the part; and where gentle traction was demanded to prevent the cartilages roughened by inflammation, from making pressure and causing irritation.

Diseases of the knee-joint, whether acute or chronic, may be placed in this apparatus with hopes of benefit. Splints, neglected fractures that tend to a false-joint; and fractures, also, that through mal-practice present such deformity as to render it necessary to break up the recent callus, - have been restored by the proper use of this instrument. We can cite individual instances to confirm the opinion expressed; and we believe that no other splint yet devised can be successfully applied to such a diversity of surgical diseases and accidents.

An Inaugural Dissertation
on
Fractures, and the general principles of their treatment,
Submitted to the examination
of the
Provost, Regents, and Faculty of Physic
of the
University of Maryland.
For the Degree of
Doctor of Medicine.
by
Frederic Van Bibber,
of Virginia.

A. D. 1857.

In the following pages I propose to consider the several varieties of fractures encountered by the surgeon, with the general principles of their treatment illustrating these by reference to such special fractures as may best serve my purpose.

This is a subject on which volumes have been written, and in order to avoid transgressing the usual limits of a Thesis, I shall endeavor to confine myself strictly to the points of most interest to the practical surgeon.

A fracture may be defined, "The sudden solution of continuity of a bone, produced by external violence or the contraction of muscles." According to the nature of the injury thus produced, it is known, 1st as the Simple fracture, in which the integuments are unbroken. 2d The compound fracture, communicating with the air by a wound, caused either by the pointed extremity of a fragment, or by the violence which produced the fracture. 3d The comminuted fracture, in which one or more fragments are isolated from the bone. 4th The impacted fracture; the extremity of one fragment being driven into the cancellated tissue

of the other. 5th. The complicated fracture, which is associated with some other serious lesion, as the rupture of a large artery, or injury of the viscera.

The next division is founded on the direction of the fracture with relation to the axis of the bone, and includes, 1st. The transverse, usually produced by direct violence, and which is, when simple, the most tractable form of fracture. 2d. The oblique, in which the line of fracture does not approach a right angle with the axis of the bone; in consequence of the pointed form of the fragments, this is frequently a compound fracture. 3d. The longitudinal, the bone being simply split lengthwise: this form is rarely seen alone, but may be produced by a blade or pointed instrument penetrating the bone, and acting as a wedge.

With regard to the situation of the fracture, we may observe whether it is in the shaft of a long bone; in one or both bones of a limb; whether it involves an articulation, or is within the capsule of a joint. This last condition especially affects the reparation

of the injury, as will be explained in speaking of that process.

The causes of fracture next claim our attention; these are immediate or predisposing. The first class includes every variety of violence capable of producing a fracture, and the nature of the injury is in some degree determined by the kind of violence – a fact to which I shall refer more particularly when speaking of the diagnosis of fractures. The predisposing causes are either general or local, and among the former we find, 1st Age: which influences the frequency of this accident by changes effected in the osseous system, which is rendered brittle by the predominance of the earthy constituents, in the bones of the aged, and by changes of form in some parts, as the neck of the femur, which approaches more nearly a right angle with the shaft in the old than in the young.

2d Sex: males being more exposed to violence than females; but in the latter we find normally the position of the neck of the femur above mentioned, and

hence a predisposition to fracture at this point.
3d Certain diseases, as scurvy, cancer, scrofula, Rachitis and mollities ossium. Among the more local predisposing causes are the situation, form, and office of the bone.

Having enumerated the causes and varieties of fractures, the highly important subject of their diagnosis next demands attention. We find among the signs of fracture some which are not peculiar to it, and are thence called equivocal; others are pathognomonic, and are known as positive or special.

The signs most characteristic of fracture are three in number, 1st Change of form in the part, produced by the weight of the limb or the contraction of muscles, drawing the fragments out of their proper relation. The deformity thus produced varies greatly, and is usually more marked in the oblique than in transverse or impacted fractures: in the latter, indeed, slight shortening is often the only change of form.
2d Mobility in the continuity of a bone, is, when present, conclusive evidence of fracture, but may be

absent in a firmly impacted fracture, or very difficult to detect in one occurring quite near an articulation.

3d. Crepitus or grating between the ends of the fragments, heard or felt when they are moved on each other: this is a most valuable sign, though its absence does not always prove the non-existence of fracture, as it may be wanting in the following cases. In an impacted fracture; in a transverse one with much overlapping of the fragments, so that their periosteal surfaces are in contact, and in this or the oblique form, if the extremity of one fragment is buried in the soft parts around. In all these cases crepitus will be wanting until the rough surfaces are again brought in contact.

I may here observe that Lisfranc relied much on the stethoscope as a means of detecting crepitus in doubtful cases; in practised hands it may prove useful, but I am inclined to doubt, with Chelius, whether this instrument will detect crepitus in any case in which the touch and the unaided ear have failed.

Among the equivocal signs may be mentioned, pain and swelling, with abolition or impairment of the

function of the part.

With regard to the repair of fractures and the modes in which that process is effected, some erroneous opinions have prevailed. In speaking of it I shall regard especially the views of Mr. Paget, which are entitled, from their author, to the highest consideration, and at the same time appear best supported by experiments and facts.

The mode of union in simple fractures differs from that observed in compound ones, and I shall first examine the process in a simple fracture of the shaft of a long bone, which may serve as a type.

In such an accident, the injury is seldom confined to the bone, as the fragments, driven in opposite directions must lacerate more or less the surrounding soft parts. The extravasation of blood which follows, is chiefly confined to the subcutaneous cellular tissue, being much less in the deeper tissues, while on the periosteum only, a few spots of blood are usually found.

As this extravasated blood does not appear to take any part in the reparative process, I will only observe

that it is gradually absorbed, except in those cases in which the presence of a large clot excites inflammation, resulting in its discharge.

The process of repair does not begin immediately; some lymph is first poured out, and the cellular tissue around the seat of injury is infiltrated with a serous fluid containing cells like those of granulations. This fluid, if considerable in quantity, may contribute to the increase of swelling often observed about the second or third day. Some time now passes before the proper reparative material is produced, the parts during this time seeming to be in a state of quiescence: this period, in man, is thought by Paget to be seldom less than one week, or more than two.

After this period of inaction, the proper process of repair begins, and may be divided into two stages—that of uniting the fragments, and the later one of modelling them, if necessary, to their proper form.

The union of the fragments is effected by the effusion, organization, and subsequent ossification of plastic

material which is thrown out around and between them: this lymph does not at first appear to differ from that effused for the repair of other subcutaneous injuries.

After this material has acquired some firmness in its gradual progress to complete ossification, it is known as <u>callus</u>. This callus, in ossifying, may pass through the transitional state of fibrous or of cartilaginous tissue, or it may assume a structure intermediate between them.

And firstly, the new bone may be formed directly from perfect fibrous tissue; this was observed by Paget in a fractured femur, six weeks after the injury, and in the radius after nine weeks. The same author thinks that whatever new bone is formed after injuries of the skull, is developed in this way.

Secondly, the new bone may be formed by the ossification of fibrous tissue whilst yet in a rudimental state, a fine granular ossific deposit taking place in the blastema of the tissue, which is thus

gradually converted into perfect bone. This mode appears to be common in those cases of simple fracture in which very quick union is observed.

In other cases the plastic material may pass through cartilage, either rudimental or perfect, or through fibro-cartilage. This process is rare in man, but has often been observed in the lower animals.

Under certain circumstances the callus is formed not only between, but around the ends of the fragments, when that which envelopes the bone is called provisional, as it seems intended merely to support the bone until union takes place, and is then absorbed.

In other cases little or none of the new material is formed around the fragments, but being confined to their extremities, and ossifying between them, constitutes the bond of union. In either of these cases the medullary canal is at first obliterated, but its continuity is gradually restored by the partial absorption of the new bone, rendering its interior cancellous, whilst its walls are left compact, and continuous with those of the old bone.

A difference in the usual position of the callus, in man and in the lower animals, has been lately proved to exist. It has long been supposed that the process of repair by provisional callus was the natural and usual one in man, but the observations of Paget and others have led to the conclusion that repair usually takes place thus in the lower animals but seldom in man.

The cause of this difference seems to be, that the circumstances in which animals are placed, prevents them from giving proper repose to the injured part, and this external callus is formed as a provision of nature to keep the fragments in apposition until union is effected. Beside this we know that the tendency to abundant formation of plastic matter is greater in animals than in man.

The former of these reasons is much strengthened by the fact that in the ribs of man, which are kept in motion by respiration, repair with provisional callus is usually seen, but in other parts of the body is seldom observed, unless circumstances prevent

quiescence of the part.

When the extremities of the fragments are not placed in exact apposition, an angle being left, this is filled by the reparative material, and the projecting ends are afterwards rounded, or entirely removed by absorption.

These are the modes in which nature effects the repair of a simple fracture, but the process is far more difficult and tedious when the air has access to the broken bone. In compound fractures the ends of the fragments throw out granulations, in which an ossific deposit takes place by which they are converted into bone. This process is slow, and the prolonged irritation and suppuration are so exhausting to the powers of the patient, that in most cases our prognosis is materially modified by the association of a wound with fracture.

Rokitansky is of opinion that the superficial layer of bone which is bathed in pus, always exfoliates, and that granulations are then produced by the bone beneath, but Mr. Erichsen doubts if

this often occurs.

Such then are the means by which a fractured bone is repaired in most cases; but there are certain conditions under which this process is interrupted or arrested, presenting to the sur-geon those troublesome cases known as non-union and false-joint. These I shall describe in turn.

Some bones, when fractured, seldom unite by bony matter, as is the case with the patella and the olecranon process; here the bond of union is the fibrous aponeurotic structure continuous over the part, and this may retain its normal con-dition, or be strengthened by the effusion and organization of plastic material. Another case in which we do not expect bony union, is when the fracture occurs within the capsular ligament of a joint; as in the neck of the femur or humerus: indeed it was long a disputed point whether under these circumstances true bony union ever takes place.

Sir Astley Cooper, Paget, Erichsen, Chelius, Gibson and other authorities whom I have consulted, agree that it is rare, but that undoubted cases have occurred. Chelius, as it seems to me very properly, attributes the frequent failure of bony union in these cases, partly to the difficulty of maintaining apposition, and partly to the isolation of the head of the bone, depriving it of the necessary vascular supply. The probable influence of the latter cause is shown by the investigations of M. Gueretin, who found in twenty-one cases of non-union in the shaft of the femur, sixteen in which the nutrient artery of the bone was ruptured.

In some cases after bony union has taken place, the new bone is absorbed, in consequence of some peculiar state of the patient's constitution, and disunion results.

Occasionally, the ends of the fragments become smooth, and are bound together by strong fibrous bands, so as to admit of motion, forming the most common variety of false joint. More rarely, the

end of the upper fragment assumes a cupped form, while the lower one becomes rounded, and rolls in the cavity of the other; the ends being at the same time coated with smooth firm fibroid tissue, and enclosed in a fibrous sac, we have a more or less perfect imitation of the enarthrodial articulation.

The occurrence of this failure of reparation may be due to constitutional or general causes, as the existence of some debilitating disease; pregnancy is said by some, to interfere with the process, but this opinion does not seem to be supported by facts. Old age would probably be more obnoxious to this misfortune than the vigor of life, as the activity of nutrition and the formative process is then so much diminished. The local causes include want of repose, or apposition, or both; the interposition of a fragment of muscle or a large coagulum between the fragments. Of the influence of deficient vascular supply, I have already spoken.

From various statistics which I have consulted, it seems that non-union occurs most frequently in

the following parts, and in the order here given: 1st Femur. 2d Humerus. 3d Bones of the leg. 4th Bones of the arm; and 5th the lower jaw.

When the surgeon is called to a patient who is supposed to have suffered a fracture, the clothing being removed from the injured part, he proceeds to make an examination by the eye, by manipulation, measurement &c. in order to determine by the presence or absence of the signs which I have described whether a fracture really exists. Being satisfied that such is the case, he may endeavor to determine its nature and direction, by the amount and form of shortening or deformity; the nature of the violence which caused the injury, or the position of the patient at the time of its infliction. These circumstances will often determine the nature of a fracture with considerable accuracy.

The examination of the injured part should be made with all the gentleness consistent with a thorough investigation, as we thus not only spare the patient much pain, but avoid the danger of

increasing the amount of injury, or of even converting a simple into a compound fracture, by rough manipulation when the fragments are pointed and have nearly penetrated the integuments.

After placing the patient on a proper bed, (a hair mattress being probably the best) we proceed to the reduction, or setting of the fracture.

If there is shortening, showing that the fragments have glided over each other, the prominences produced by their extremities, and the direction of the lower part of the limb will point out how we must manipulate in order to disengage them. This being done, we so adjust the limb as to restore as nearly as possible its natural form, in which position it may be supported by pillows &c. until we have prepared the proper apparatus.

And here the student finds himself at a loss to choose among the various forms of apparatus, all professing to meet the indications of treatment, yet most of them defective in the most important points. I will not dwell on the apparatus for

the upper extremity, since it is very simple, having no obstinate tendency to deformity to correct.

But for the Femur, whose fracture, as Dr Hennen remarks in his Military Surgery, "so often deforms the patient and disgraces the surgeon", almost innumerable splints and boxes have been tried, but for the most part in vain.

The indications to be met, are evidently, to place the limb in such a position as to secure co-aptation of the fragments; to retain it in this position until union shall have begun, and last, but not least, to accomplish this with the greatest possible degree of comfort to the patient. The object of all forms of apparatus is to maintain this co-aptation, and prevent deformity, which several causes combine in producing. These are, the weight of the limb, the contraction of its muscles, the motions of the patient's body, and especially the constant tendency to slip down in bed, from the elevated position of the shoulders. The last is, I believe, a most common cause of the shortening which so often follows a fractured femur.

Among the forms of apparatus which have met with most favor may be mentioned Dessault's long splint, consisting of an outer splint, three or four inches wide, and extending from the crest of the ilium to several inches beyond the foot. An inner splint reaches from the perineum to the sole of the foot, and an upper one from the pelvis to the knee; a counter-extending band passing over the perineum, and through a hole in the upper end of the long external splint, completes the apparatus.

Dr. Physick modifies this apparatus by extending the external splint to the axilla, and placing on its inside, below the foot, a block to prevent obliquity in the line of extension. This form is much used I believe in the Philadelphia hospitals.

Liston's apparatus is more simple, consisting of the outer splint alone, extended to the axilla, and properly secured by bandages.

I have never seen either of these splints applied, but judging from plates and descriptions I should

think that however well they may answer the indications for promoting union, they must fail in doing this with any degree of comfort to the patient, which I have mentioned as an important point in the treatment.

This I should infer from the fact that the apparatus forms as it were a part of the bed, and the patient's body must either remain fixed in one position, or disturb the relation of the fragments by moving the upper one, whilst the lower cannot accompany it. No one who has ever been on a sick bed will undervalue the relief afforded by occasional change of posture, and in order to permit this indulgence to the patient with a fractured leg, the limb must be so adjusted that it may easily follow the body in its motions.

This is accomplished by the simple expedient of <u>suspension</u>, which principle has been applied in some of the English hospitals with the most satisfactory results. But the form of apparatus I have seen employed, and whose merits I can

therefore best appreciate, is the "Anterior Splint" used by Prof. Smith of Baltimore.

This apparatus consists of a single splint, of such a form as to be adapted to the anterior surface of the lower extremity when slightly flexed. About five inches of its upper end, lie horizontally on the pelvis; from the groin it rises, to the knee, where it forms an angle, passes down over the leg, and at the ankle turns slightly upwards to apply its lower extremity to the dorsum of the foot. The splint may be made of wood, or of stout annealed iron wire, and in either case is furnished with rings above and below the knee, for the attachment of cords. The limb is first secured to the splint by several broad strips of common adhesive plaster, around the foot, leg, and thigh. The apparatus is then supported by assistants, and the surgeon proceeds to pass a bandage round the splint, and the limb (which should hang a little below it) from the toe to the hip. The limb now is not in contact with the

with the splint; but hangs in a festoon of the turns of the roller, which if properly applied give a support perfectly adapted to the form of the limb. A cord several feet long is now attached by its ends to the rings above and below the knee,- its middle portion passing through a loop at the end of another cord long enough to reach the support: this may be a hook in the ceiling, or better still, a movable frame over the bed.

By moving the patient or the support, any degree of obliquity may be given to the cord, and thus a constant gentle traction made on the limb; which tends to prevent shortening; the splint being narrower than the limb, there is also a lateral pressure exerted by the loops of bandage in which it hangs. The limb and splint being freely suspended, a few inches above the bed, the patient cannot by any moderate motions of his body, or by slipping down in bed, change in the least the apposition of the fragments.

In compound fractures the splint is best made

of wire, and an opening in the turns of the roller gives perfect access to the wound. These wire splints are made straight, and the proper angles are easily formed by the surgeon when about to apply them: but in fractures of the patella I have seen the straight splint used with marked success.

The anterior splint is also applicable to cases of coxalgia, in which it accomplishes an important object in keeping up traction on the limb, and thus taking off all pressure from the diseased joint. The degree of comfort secured to the patient by this apparatus, I do not believe can be conferred by any other now in use.

To these means of treatment, we have a most valuable addition in the starched apparatus, which is especially applicable to fractures of the upper extremity. It is very highly extolled by Mr Erichsen who used it constantly in the hospital of University College, and in those cases in which I have seen it used, it has fully merited the preference he has given it.

A dry roller is first applied, the osseous pro-
-minences of the limb being padded with cotton
wadding. Over this are laid splints of thick
pasteboard, well soaked in starch, by which
they are so softened as to be easily adapted to
the limb, and these are covered by a bandage
also starched. Lastly, a roller is applied, the
under side of the turns being starched as they
are laid on.

It might seem that there would be some dan-
-ger of producing strangulation by the imme-
-diate application of such a closely fitted appa-
-ratus, but the moderate pressure of the bandage,
with the cooling effect of the great evaporation from
the wet starch, prove very effectual in taking
down the swelling and extravasation. The
apparatus when dry, gives us a firm, light, and
perfectly adapted splint; in which even with a
fractured leg the patient may soon venture to
exercise on crutches in the open air, thus aiding
materially his recovery.

The accidents most likely to occur during the treatment of a fracture, are general or special in character. Of the former, traumatic delirium, tetanus, and erysipelas are the most common, but the treatment of these does not come within the limits of a Thesis on the subject before us.

The following are the special accidents most to be guarded against:

1st, Muscular spasm in the limb, if caused by irritation from the fragments, is best met by attention to position; if from nervous causes opiates will often prove effectual. This contraction of the muscles is sometimes very obstinate, causing great displacement of the fragments; in such cases, section of the tendons of the contracted muscles has been recommended, but this should of course be a <u>dernier resort</u>.

2d, Œdema, or even gangrene of a limb may be caused by a bandage too tightly applied at first, or by the limb swelling considerably under one which was at first properly applied. If the toes

or fingers are left uncovered, we have a very good index of the state of the circulation, in the rapidity or slowness of the return of blood under the nail after pressure.

3rd Great extravasation of blood may occur in a simple fracture, when the surgeon should not be hastily tempted by fluctuation in the tumour, to lay it open. The continued application of cold with moderate pressure will in most cases disperse these tumours, which rarely end in abscess.

One of the most serious complications of fracture in a limb, is the implication of a large joint; by the rules of military surgery such an injury if compound, demands amputation. But in patients more favorably situated we may in some cases save the limb, though anchylosis is the usual result.

When a fracture is complicated with dislocation in the same limb; I think it would be best to put up the limb securely in wooden splints, and reduce

the dislocation at once, instead of waiting as recommended by some authors, until the fracture has united, when reduction will be always difficult, and sometimes impossible.

In a severe case of fracture, one of the first questions presented to the mind of the surgeon, is, whether he shall remove or attempt to save the limb. This is a question of serious importance, and its decision demands the most careful exercise of judgement: it should early be decided, for I believe it is fully proved by statistics that if amputation be demanded, the first twenty-four hours after the occurrence of the injury is the most favorable period for its performance.

Conservative surgery is certainly to be cultivated, but I have no doubt that lives are often lost from an unwillingness on the part of the surgeon to operate sufficiently early.

In deciding this point, we must take into consideration the, age, constitution, habits and present condition of the patient. The influence of

age is exemplified in a case now under Dr Smith's treatment, which I have watched for some time.

A boy, about fifteen years of age, suffered severe compound and comminuted fracture of the left tibia near its middle. When Dr Smith saw the case, some sloughing had taken place, and the splintered tibia was exposed for nearly two inches, with every prospect of complete loss of substance to that extent. Encouraged however, by the age of the patient, Dr Smith resolved on saving the limb, and though the process of repair has been slow, it is now approaching its completion, and with only a degree of shortening, easily remedied by a thick-soled shoe.

The apparatus required for the treatment of compound fractures, is modified so as to secure easy access to the wound, and for this purpose we may employ Liston's, the double-inclined plane, bracket splint, swing box, or the anterior splint, which as I have before shown is as applicable to compound as to simple fractures.

Our first object is to convert the compound into a simple fracture by closing the wound, if possible. If, from the character of the wound, we hope to effect this, it may be dressed with lint soaked in the blood, as recommended by Sir Astley Cooper, or perhaps this may now be replaced by collodion.

We now endeavor to moderate inflammatory action by attention to position, cold lotions, or irrigation with cold water, and light diet with an occasional laxative if required.

In some cases necrosis of a portion of bone takes place, and the sequestrum must be removed before union will be effected. If it unfortunately happens that the necrosed portion has been enclosed in a mass of callus, the process of separation is extremely tedious, and the inability of the patient's constitution to bear the protracted struggle, may compel us to resort to resection or amputation.

But suppose our attempt to save the limb has failed from the occurrence of gangrene, or the supervention of asthenic irritative fever or hectic.

the patient's powers giving way under the continued local irritation, and exhausting discharge. Secondary amputation now becomes necessary, and has furnished favorable results, the patient frequently rallying very soon after the operation. We must be careful, however, not to let the patient sink too low, or the operation may be worse than useless, death resulting at once from the shock.

Much depends upon the after-treatment of secondary amputations, and from the previous condition of the patient, I think that in most cases this should be supporting rather than antiphlogistic. In London practice, indeed Mr Erichsen has frequently found it necessary to give large quantities of brandy, wine, or porter — but in large cities there is no doubt a tendency to asthenia which often modifies our treatment.

The causes and modes of formation of false joints and un-united fractures, I have already described, and I will close this Thesis with a

brief account of the various methods of treatment which have been adopted with the view of causing bony union to take place.

All the operations employed for this purpose, are conducted upon one of two principles: the first consists in dividing or removing the fibrous or cartilaginous bond of union, and thus converting the case into a recent compound fracture; the second has for its object the excitement by various means, of inflammatory action, inducing the parts to throw out, nature's plastic material.

The first class of operations consists in the division of the bond of union, or of exposing and resecting the ends of the bone, but neither of these appears to give favorable results.

Several modes of accomplishing the object of the second variety of operations have been used. The most simple consists in the introduction of acupuncture needles or of a seton, across the false joint; both of these methods have occasionally

succeeded.

Some have found favorable results from passing around the callus a silver wire, which is gradually tightened and thus produces the requisite amount of inflammation.

Dieffenbach attains the same end by driving three or four ivory pegs into holes bored in the ends of the bone; these are removed in three or four weeks, by which time, if any benefit is to be gained, it will be accomplished.

It is not at all necessary to divide the callus, for if the process of ossification is established, this will often become consolidated.

From what I can gather with regard to the effectiveness of the several means I have mentioned, I think that the seton and the method of Dieffenbach promise the most satisfactory results.

An
Inaugural Dissertation;
On
Pneumonia.
Submitted for examination,
To The
Provost, Regents, and Faculty
of Physic,
of the University of Maryland;
For the Degree of
Doctor of Medicine:
By
George Heatherbury
of Virginia.

February 1857

Pneumonia

Among all the important subjects within the wide range of the Medical Science, no one, has received a greater share of attention than that of Pneumonia.

The frequency of its accurence, the essential organ that it invades, together with the signal discoveries which modern reddarch has supplied to its diagnosis, concur to render it a subject of deep and absorbing interest to every practitioner of medicine.

Pneumonia may be defined to be an inflamation of the parenchyma of the lungs. Three well-marked stages of the disease are exhibited marked by characteristic path-

alogical condition of the organs.

The first stage or condition produced in the lung by inflamation, is that of engorgement in which the vessels of the organ are distended with blood or bloody serum. Its appearance in this condition is of a livid hue, its spongy texture is less distinct, it is also heavier than natural, but still crepitates when squeezed between the thumb and fingers, although it does not collapse so readily under the pressure of the atmosphere as healthy lung. When cut the whole tissue appears red, and from it transudes a great quantity of frothy serum; at the same time it is less

cohesive, and more easily torn or broken up. As the morbid process advances, the serous fluid that exudes into the air-vessels becomes of greater density, and presents peculiar characteristics which when expectorated we are in the habit of regarding, as the rusty coloured sputum of pneumonia.

Pneumonia in its first stage is generally marked by a decided chill; it is one of the most important initials in pneumonia. Except intermittent fever and puerperal peritonitis, pneumonia is of all acute affections that most frequently accompanied by a chill at the commencement. In old

persons especially, a sudden chill should lead us to suspect pneumonia. It varies in intensity from a severe chill to a mere chilly sensation. The fever which follows the chill is generally very intense, and in plethoric individuals, accompanied by flushing of the face, injection of the eyes headache, and other signs of local determination of blood.

The pain in the chest, which, when present, usually appears early, varies much in degree, being sometimes intense, and at others dull; when the pain is intense the inflamation has extended to the pleura, since the true lung pain is

rather dull, or a deep seated feeling of heat and weight rather than of pain. It is most commonly experienced on a level with, or a little below, one or other breast; but it may exist in almost any other part of the thoracic parietes. Generally it is most severe at the commencement of the disease, declines by degrees, and ceases altogether for some time before the pneumonia ceases. It is exasperated by cough or a deep inspiration; often by slight pressure upon the ribs or intercostal spaces. With this pain or feeling of soreness in the chest, there is cough, which is short and dry at first, or

accompanied with scanty expectoration, and is by no means proportioned to the intensity of the inflamation, being in some cases so slight as to escape notice. In a few hours this cough is accompanied by the expectoration of a remarkably peculiar sputa which constitutes one of the most certain indications of the presence of pneumonia. It is of the consistence of thick mucilage, containing numerous minute air-bubbles, and adhering so firmly to the sides of the vessel containing it, that it may be inverted without its escaping. This matter may be of every pos-

sible colour, sometimes almost like white of egg, more frequently of a rust colour, and sometimes tinged with blood, but it is also not unfrequently of a bright yellow colour, or even bluish or greenish.

The shortness or quickness of breathing is also an early symtom, and a better index of the extent of the disease: but it is judged of by the number and forced character of the respiration, rather than by the feelings of the patient, which are often deceptive. In some persons the inflamation of a very small portion of one lung will embarress the respiration greatly.

In others who have a much larger portion of the pulmonary tissue intensely inflamed, the dysnea is slight. So that the degree of dysnea is not a correct index to the extent of the inflamation. In some cases, particularly where the attack has been sudden, or has supervened on previous disease of the lungs or heart, the dysnea is more intense, obliging the patient to assume a particular posture, which is commonly on the back with the shalders elevated. Advanced pregnancy and deformity of the thoracic parieties render the dysnea more violent, independantly of the extent of the inflamation.

The pulse is very much accelerated in pneumonia. The rapidity of the pulse is generally in ratio with the extent and severity of the disease, ~~and usually always~~. Generally the pulse reaches its height by the third or fourth day, although the disease may continue to increase for several days after. There are, moreover, the other symptoms of fever, such as thirst, fured tongue, loss of appetite, scanty and high-coloured urine; pain in the head and limbs. If blood be drawn, it exhibits the buffy coat.

The physical signs which

characterize this stage of the disease, is a dry crackling sound accompanying each act of respiration, but heard most distinctly at the termination of the inspiration. This sound may be very properly compared to the noise produced by one rubing a lock of his own near the ear between his fingers and thumb; or it may be compared to the bursting of the fine bubbles on any foaming liquid. This which is called crepitant rhonchus is the finest kind of crepitation. This may be heard in a very limited spot at first generally in the inferior and posterior region of one side. In its slighter degrees it is scarce-

by more than an unusual loudness and roughness in the vesicular murmer, as if the air met with slight short resistances in its passage, which distray the smoothness of the sound: but in its more decided degree, there is distinct crepitation.

However perfect crepitation may be, it is almost always limited to inspiration; sometimes it is herd during the whole of inspiration, at other times the first half is pure, and crepitation is herd only at the end. Sometimes it can only ~~can~~ be herd by making the patient cough, when it is herd during the cough, or during the

deep inspirations which follow it.

The physical cause of the crepitation of pneumonia is refered to the passage of air in minute bubbles through serum effused in the smallest air-tubes and vesicles, and that the fine and even character of the crepitation depends on the fineness of the bubbles in these tubes which rise and burst in quick succession, and differs from the mucous rhonchus only in the size of the tubes in which it is produced, and the consequent size of the bubbles in them.

Up to this time there is

no diminution in the resonance of the chest on percussion, the cells not being sufficiently closed to prevent their containing a considerable quantity of air. The signs then which belong essentially to the first stage of pneumonia are - inflammatory fever - pungent heat of skin, - dry crepitation without loss of resonance on percussion: with these are commonly associated pain in the chest, cough, and viscid expectoration. The anatomical character of this stage of pneumonia is that of engorgement. The substance of the lung is

gorged with blood or bloody serum and so much distended, that the whole tissue appears red, of different shades, and is much heavier than usual, and crepitates less under pressure than sound lung does. It is also less elastic than natural retaining in same degree the impression of the finger

In the second stage, or that of hepatization, there is for the most part a continuance of the fever; the heat of skin is not necessarily present, though it is generally so in practice since when one part of this inflamed

mass is in a state of consolidation, there is probably some other part in a state of engagement, either progressing towards consolidation or retrograding from it. The disturbence of the functions of the lungs and other organs, however, becomes greater, there is more duskiness of the countenance, owing to the greater impediment to the aeration of the blood, the functions of the liver and kidneys are also more disturbed. The disease also sometimes proves fatal in this stage, and signs of failure of the powers of life may man-

ifest themselves by the pulse becoming quicker and unequal, or the tongue brown and dry; evinced by hurried and labarious breathing, livid countenance, wandering delerium, very small pulse, and clammy sweats.

In favourable cases, the disease may decline on the third or farth day, with a general alleviation of all the symptems. This is generally first evinced by the skin becoming more coal and moist, and the expectoration lefs tinged visced, and more abundant and opaque, like that of declining branchitis.

Sometimes the improvement is rapid, the patient being restored to convalescence in six or eight days, but it is often more protracted, slight exacerbations recurring every evening, and prolonging the disease for a fortnight or more.

The signs furnished by auscultation in the second, are very different from those furnished in the first stage: the lung having now become consolidated, the air is excluded from the vessels, and we have dulness on percussion, the sound of the air passing along the tubes becomes au-

dible, and we have tubular breathing. The intensity with which these sounds may be heard must depend evidently upon the continuity of the consolidated portion, and upon its being near the surface; if the consolidation be confined to seperate lobules, here and there, through the substance of the lung (a very rare occurance) there may be neither tubular breathing nor bronchophony; or if there be a consolidated mass of some size towards the centre of the lung, distinct tubular breathing may be heard without bronchophony, though the

latter is scarcely ever audible without the former. In ordinary acute pneumonia, however, it almost always happens that the inflamation extends to the surface, thus we have in its second stage both tubular breathing and bronchophony.

As, however, the consolidation of the lung renders audible the passage of air along the bronchial tubes, which could not be heard independantly of it, so in the same way it gives an increased distinctness to the bronchial rattles, which often become under these

circumstances remarkably characteristic signs.

The third stage to which inflamation brings the lung, is that of suppuration or yellow hepatization. In this stage the diseased organ becomes infiltrated with a purulent matter, which is generally consistent at first, but soon acquires the liquidity of common pus. The lung in this stage presents a redish yellow, or greyish colour. It is still more friable and easily broken up than in the stage of hepatization. This greyish pus oozes out plentifully if

the lung be incised; or it will be made to exude even by gentle pressure. When broken up between the thumb and fingers it forms a yellowish grey pulp.- We cannot tell positively from the physical signs whether the lung remains in the second stage or whether it has advanced to the third. But if a portion of the lung break down thereby forming an abscess into which air finds its way we will have a large gurgling crepitation or cavernous rhonchus; and when the cavity has been emp-

tied of its pus by expectoration, pectoriloquy and the cavernous respiration will be added. This condition ie abscess of the lung in pneumonia, is very rare. It is also rare for it to terminate in gangrene; but when gangrene does occur it may be detected by the foetid odour emitted from the diseased part in respiration and cough; and the expectorated matter is also extremely foetid.

Treatment - In the treatment of pneumonia the agents upon which we mostly rely are: blood-letting, tartarized antimony, and Mercury. But

we should accomodate these adjuvants of nature to the various stages of the disease. In the first stage, in good constitutions, free bleeding is demanded, and it may even be proper to repeat it. We should bleed till a decided impression is made upon the pulse, without regard to the quantity of blood taken. If general blood-letting be postponed till the second stage or till branchial respiration occurs, it will accomplish but little good; but even here leeches may be employed with advantage. We may also

give about one-sixth of a grain of tartar emetic every two hours; and after two or three days of such treatment commence with the use of calomel in two or three grain doses which may be given in combination with a full dose of Dovers powders at night.

In the second stage general bleeding is not often admissible - we trust here more to the Mercurials. At a still later period we use the stimulating expecturants. We cannot lay down any special rule or course of medicine in the treatment of Pneumonia; nor indeed

can we in the treat-
ment of any other disease.
We can only treat the
various conditions in which
the invading disease pla-
ces the organ or organs
invaded; an in this man-
ner use our skill to defeat
the enemy in the various
ways in which it may
seek to distroy life

George P. Beatherbury

University of
Maryland
Feb 1857

G. P. Leatherbury

An
Inaugural Dissertation
on the
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of the
Vis Conservatrix Naturæ
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Provost Regents and
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By
James Arthur Mullan
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1857

v

Gentlemen:-

"Tempora mutantur et nos mutamur cum illis." I imagine that I may, with very great propriety, thus exclaim:- Having conformed to the several rules you have prescribed for the guidance and government of the student, I am now about to comply with the last farewell requirement, viz.: the "writing of a Thesis." In proceeding to the accomplishment of this task, I cannot refrain from a candid acknowledgement of a participation in those feelings of anxiety and perturbation of mind, in common with others of the same "fold" around;- sensations- in-

desirable — which must prevail, to "do to date", more or less, when the days of its probation have well nigh terminated.

'Tis amusing (and yet full of moral, upon a certain occasion incidental to the history of the Medical Curriculum!) to listen to the grave and anxious interchange of interrogatories on the part of A. and B. as to their respective subjects of composition! Now is this at all to be thought strange of, when we consider the very wide and diversified field of medical topics that spring forth before the student's mind in surveying and essaying to make a proper and judicious selection therefrom.

Besides, his embarrassment and confusion are still further enhanced, when he reflects how well understood are those great principles which underlie the grand and symmetrical superstructure of the Science of Medicine, and, therefore, how little originality can possibly be evinced in any thing he may say upon the subject.

Such, then, Gentlemen, are the irresistible thoughts that flutter across my contemplation, in approaching the duty you have assigned me. Yet I have endeavored to avoid the obtrusive, to wit: that dull and insipid recapitulation and comment of the indubitable facts

and historical facts and points of any particular case of disease, and, in the next place, to discuss such a subject as shall not be totally deprived of a medical nature.

Then, let me ask your kind attention to a brief, general and concise treatise upon what I have thought might very properly fall under the title of the—

"Theory and Manifestations of the Vis Conservatrix Naturæ."

I have often thought that "Dame Nature" had not, generally speaking, been looked upon by Physicians, with that amount of admiration and attention, which—upon the "Second Thought," she seems to merit

at their hands; and, doubtless, this neglect of her claims is, in a great measure, attributable to the impression which the captivating theories and semi-plausible arguments advanced by our modern speculators, have made upon the minds of the Medical Corps — thus diverting their attention and contemplation from the true point of the compass — the very *primum mobile* —, if I may so express it! Again: how often do we see displayed even among the very pupils in the Science of Medicine a great disposition (and that not limited in its sphere,) to be carried away by arbitrary appellations, and the surmises of this and that theorist! Why not this then constitute a second-

reason why the demands that this "Vis Medicatrix" daily — nay, hourly — forces upon our attention, have been so extensively slighted and disregarded by the Medical World?

Before proceeding farther — I cannot — refrain from an allusion to the striking fact that those Medical men in the Profession who stand out pre-eminent, trusted and almost idolized for their wisdom and discriminating judgment, have been the warmest advocates of this "Conservatrix" principle; and, in confirmation of this, I need not look far for the testimony of a <u>living witness</u>:— Yes, the so justly celebrated Prof. R. R. Smith, of the "University of Maryland," who, not long since, whilst lecturing to

this class upon the subject of "Aneurism," after having reminded them that "nature sometimes brings about a spontaneous cure," with much earnestness and warmth, remarked — "Gentlemen, after all, mine is an humble calling". I have quoted this gentleman's remark in order to make the assertion that the administration of drugs is but the very scientific and honorable vocation of a handmaid to Nature. "Homo magister et interpres Naturæ," says Lord Bacon.

Now, it behoves me to define this protective or conservative tendency of the human organism, and here I approach a ground not unlike that which it has been very difficult to grasp or, as respects many

points of Practical Ethics which have engaged the attention of the sound-est and most gifted men in the Profession. It is one of those matters to which it is not facile for us to adapt our methods of thought and conceptions; we are only familiar with its results, as they present themselves to our perceptions.

I should then define this something resident in the system to be:- "A living principle, of which we know nothing, save by its results." It is always alive to the needs of the organization, and when the latter becomes in any manner obstructed, disordered or injured, lis here its principles are set in action, and the expressions of its reparations become manifest. So quickly does it perceive

the compromised health and natural action incident to the vigorous and robust constitution. Authors - many of them are very much in the fashion of alluding to what they style the "Vital Force," "Resources of Nature," and such like terms, with so much of levity and self-complacency, that it appears to me a question of doubt whether they really have even a tolerably fair notion of the idea they are intended to convey; for instead of pointing out or, at any rate, attempting to elucidate the sphere of this reparative power always accompanying the working of that mighty machine (so to speak,) the animal frame -

and to thus furnish up with some constant and somewhat systematic notions of its abilities, tendencies and inclinations — what amount or degree of external or injury, injury must be applied to the body in order that it shall be compromised; in short, to draw up "the rules and exceptions." The fact is, the number of those is not small who are indisposed to attribute any very great merit to this inherent element of the human organism. Still, their doubt of its existence is amply and satisfactorily dissipated by the significant fact that there is a certain something manifestated in the system, when the latter is in a diseased condition,

which, as all past experience has proven, is well calculated to modify our general theoretics, or may render assistance or prove obviating to their application.

Now, I would not be understood as over-estimating the "vis conservatrix Naturæ", my sole aim being to urge its just claim upon the careful consideration of him who is summoned to alleviate the afflictions of his fellow-men. I am deeply sensible of its complex and abstruse nature, yet, taken in its general features, it presents many points of absorbing interest. Moreover, from whatever point of view it be contemplated, its efforts, its strivings are constantly being developed. I shall, then, speak, at

first, as follows:—

"Those who have made the subject of Physiology their study, have long since noticed that in the corpus of man there exists a force, principle of action — a vis medicatrix — whose property it is to appreciate the infliction of injuries, and, looking with care to the unity and safety of the system, to put forth its energies of action to repair those injuries, either by the way of reparation, regeneration of a living organization, or of one a part thereof.

But the fruitfulness and productiveness of the action of the "Insita Vis" are more largely and strikingly displayed in the "Vegetable Kingdom" of God's Creation — to illustrate,

however, would be a digression from the proper scope of my subject. Still one case may not be so considered. Here it is: when a tree is deprived of its branches, we see that the injury done to the body is repaired, by a process akin to that started up in the human system when a wound is inflicted upon it. The same reparative elaboration is also well evinced in the Lobster when it is deprived of its claws, and in the Serpent that has lost its tail.

But the opposers of the reality of the Vis, call this conservative disposition sympathy, so long the theory of the Peripatetics, and which universally prevailed in the

seventeenth century, and which must have rather blinded the minds of its supporters to a certain extent, for it seems to have carried them forward to the perpetrating of the most absurd and ridiculous follies, in which no less characters than Sir Kenelm Digby figured!!! And then it was the aromatic unguent occupied a conspicuous place in the Materia Medica! Then it was that the weapon possessed such salutary efficiency! It may not seem tedious, perhaps, to invoke the Muse, in this connection:—

"When I was chidden by my nightingale,
For my neglect of young Hippolito,
I went to visit his body and soon found
His soul was but retired, not sallied out;

Then I collected
the best of simples and made the
the leaf of bacon, and to the wound applied,
The healing juice of vulnerary herbs.
His only danger was his loss of blood
But now he's naked my lord, and his blood
The must be replid again, as I have done it.
Anoint the sword which pierced him
With this weapon, and wrap it
Close from air, till I have time to
Visit him again!"

I now seek to show another
"manifestation of the vis Conservatrix." Hemorrhage. — No one, I suppose, will question that very good results are often produced by the flux, however he may cavil at the "Efforts of Nature", and that such an occurrence denotes an alteration in functions which have

been long the subject of disorder and disease, and a restoration to their abnormal and regular condition; for example: in an over-free habit of body, a moderate amount of of hemorrhage may lessen the severity of the cause, as is well illustrated in a fever of long duration, where the suppression of diarrhoea, or perspiration, denote that the sections, which have long been held in allegiance, in consequence, are again assuming a new condition and that the diseased link is commencing to retire from the field.

The Therapeutist, from this reflection, obtains very valuable information, which may lead him to overcome irregularities,

when they arise in the action of the organs, provided they are beyond the due point; and, at the same time, not tormented too much with the instinctive - the vitate actions, should they seem to be going on formally.

It is also to be kept in mind that, in the management of disease, it is not always necessary to administer drugs, unless the indications for their application be clearly pointed out.

Another remarkable "manifestation" of "Nature's power," is, in cases of fracture of the bones - if such be "simple!" Behold how the "callus" is first elaborated, in order to join the broken extremities; how well adapted they are - the

one to the other. Then this first stage is supplanted by an effusion deposition, and, finally, Nature has proven herself competent to the task for which she was prepared.

I need notice that, of course, the vital activity, generally, bears a direct relation to the amount of injury the system has suffered. These forces may, in other words be counterbalanced by a certain degree of violence inflicted.

Look, too, how apparent are her energies in "tension" how by the construction of certain physical conditions, these may be cured. Again with what vigour she comes into action where a large and important Artery

has to be tied, the row stands her agents, as it were, and the "Collateral Circulation" is established; thus permitting a due supply of nutrient fluid to all parts and tissues of the living frame.

She is true to her trust also in serous membranes — lymph is effused and protective barriers consequently formed.

Obstetrics has improved by attention to her hints. We can now, in certain cases and under given circumstances, imitate her actions, by the careful administration of Ergot, which occupies so useful a place in the Materia Medica, in an obstetric point of view. But why

should I multiply instances?

Let us, then, never forget that there is ever resident in our constitution a certain amount of conservative and reparative power — which, when outweighed by diseased action, must be aroused by the art of medicine, and which, when so called out, will assist the action of our curative appliances.

In concluding my subject, Gentlemen, I must acknowledge the kindness you have shown towards me, and express the hope that the field is still wide enough for the investigation of facts, and that, in it I may, perchance, "pick up a few crumbs from the rich man's table."

THESIS

On

YELLOW FEVER.

Respectfully Submitted To The

GRADUATE

Faculty

Of The

UNIVERSITY

Of

MARYLAND

For The Degree Of

DOCTOR In MEDICINE

By

JOHN G. ORTON.

Of Baltimore. 1837

Yellow Fever.

[illegible] good but little if any, has been done, or can be, to throw light upon this intricate subject, [illegible] opinion has existed among men equally qualified to judge regarding its nature, but seem appear to entertain different views in regard to its nature. It is admitted to be a disease of hot [illegible] as an epidemic but in two localities, in the immediate neighborhood of [illegible] excessive heat, and strongly during seasons when there is an abundance of rain.

of autumn, and [illegible]

[illegible] the sea coast, in gardens and by

[illegible]

amongst scattered shrubs and on

inland lawns. The term yellow, from

[illegible]

fears to be unfounded, and though a

ordinary symptom, it is not invariably

present in every instance." It is said to

be observed in the most malignant cases

only, or in a particular stage of the

disease, in which signs of brain lesion

[illegible]

healthy treatment for [illegible]
would not get [illegible]
It is now or [illegible] impossible to
nurse or attend to, never till with it
disease [illegible] till the [illegible]
without communicating it, in [illegible]
[illegible]
[illegible] communication between
that place and our own city of [illegible]
[illegible] to [illegible] the [illegible]

[illegible]

[illegible] called a [illegible]

[illegible]

would seem to [illegible] that we

[illegible] the [illegible] [illegible] [illegible]

under the disease, [illegible]

it is low, [illegible] and [illegible] [illegible]

[illegible] from [illegible]

[illegible]

which would [illegible]

a certain [illegible]

[illegible] and not [illegible] the [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] it [illegible] and [illegible]

[illegible] in [illegible]

[illegible] may occur [illegible] sporadically, [illegible] epidemic. It is seldom [illegible] 40 deg North latitude. Strangers are more liable to be attacked than natives, and those in [illegible] of life, than in [illegible]. The exciting causes [illegible] generally exposure to cold, intemperance, [illegible] and [illegible] mental emotions.

Perhaps the most striking [illegible] of [illegible] is [illegible]

[illegible] and [illegible]

in the stomach, it was found to be black bile, but fortunately on proving it to be altered blood, it is soluble, and upon the second injection standing for a while, it [illegible] having the appearance of [illegible]

raised would complete the system of the model, [illegible] rest

[illegible]

[illegible]

[illegible]

Case

Case death followed in twenty-six days, and some time after death the decomposed blood. The brain in some instances is found injected with the black blood, upon its membranes, non-firm. Inflammation of the mucous [illegible] some time it is found engorged with blood. It appears that any part of the body is more or less affected, when attacked by this malignant disease

[illegible] in an iron mad [illegible] he

[illegible] symptoms [illegible] [illegible]

[illegible] medium stature and is now worked

in with [illegible] although with hooped

pieces, still accommodating [illegible]

red excessive limit, sometimes nauseous,

[illegible]

line, the pain in the head con-

[illegible]

cylindrical, pulse never continued

not always full and strong, the tongue

[illegible]

with [illegible] of the [illegible]

[illegible]

[illegible]

[illegible] three days, the [illegible] [illegible] to [illegible]

This [illegible] may [illegible] in convalescence but more [illegible] to almost helplessness.

[illegible]

climbed, the [illegible] are [illegible]

[illegible]

[illegible]

stances they are mostly or quite [illegible]

[illegible]

place in the [illegible], [illegible],

[illegible]

[illegible]

[illegible]

in [illegible] the skin and [illegible] a [illegible]ish tinge, [illegible]

[illegible] countenance has a wild expression, the eyes [illegible], [illegible] about the mouth, and [illegible], the tongue is dry, brown and covered with [illegible]

[illegible]

[illegible] the patient's teeth and [illegible]

[illegible]

[illegible] become cold, and the pulse suddenly ceases to exist; but in many cases, the [illegible] to the [illegible] the disease, and the patient [illegible]

[illegible]

[illegible]

[illegible]

[illegible] and [illegible]

[illegible]

[illegible]

mouth and in some cases [illegible]

[illegible] the conjunctiva [illegible]

to be quite injected [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] against the [illegible]

[illegible] the vision is at times [illegible]

that the patient cannot see objects [illegible]

placed near. This symptom is considered

[illegible] to be a false one. The duration

[illegible] the [illegible] consequent to
which appears to be much [illegible],
shin bones [illegible], and [illegible], the
natural or marble, the pus [illegible] to
[illegible] just [illegible] to be [illegible]
[illegible] the [illegible],
the tendency is often found to be most,
instead of diminished,
[illegible] of the [illegible],
[illegible]
calm or [illegible]
[illegible] with [illegible]
[illegible] to
shin determine [illegible]
[illegible] [illegible] the
[illegible], with the [illegible] of [illegible]
[illegible], the [illegible] with the [illegible]

and other lower shrubby terminals
[illegible] with the ordinary size
[illegible]
[illegible]
[illegible]
[illegible]
day, [illegible] as long as the second and
[illegible] to the ninth, or [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
and six inches higher more, which [illegible]

[illegible]

[illegible]

[illegible]

much more shining in the sun.

In the valley the black sand is quite

[illegible]

[illegible] will [illegible]

boiled dry, the sand boiled dry,

[illegible] [illegible] [illegible]

in a quiet intervalled, while it [illegible]

[illegible] of [illegible]; [illegible] [illegible]

[illegible] in valleys, [illegible] in the [illegible]

the [illegible] [illegible] in summer

[illegible]

[illegible] at any season. [illegible]

[illegible]

[illegible]

seems to depend upon the severity of the [illegible]
weather. It is now well to know, also, that
the, we are unacquainted, [illegible]

To these we are [illegible] in this matter;
and to these we are exposed to the dangers
common to the atmosphere. At the [illegible]
day, or and the eleventh day, [illegible]
generally be expected. From many [illegible]
blister is said to be a favourable symptom,
each and generally fatal, but not [illegible]

[illegible] surrounded the patient,

[illegible]

[illegible]

[illegible] the tissues, and [illegible] with
imbedded in the midst of the [illegible]
[illegible]
should be removed [illegible]
[illegible]

early stage of the disease and therapeutics
should be adopted, Mercurialize, calomel
and iodide — Venesection would
[illegible]

It is wholly inadmissable, Calomel should
be given early; calomel combined with jalap
may be given at intervals of three or four hours
and if it does not act in a few hours
castor oil should be given; the bowels should

be kept open by mild aperients.

[illegible]

[illegible]

[illegible] at [illegible], in [illegible]

stage of the disease it acts well [illegible]

[illegible]

and leeches may be employed [illegible]

or [illegible], [illegible], may be applied

until the skin becomes reddened, [illegible]

[illegible]

[illegible]

stimulant [illegible] must be given [illegible]

where the vomiting is obstinate, The [illegible]

[illegible]

[illegible], [illegible], [illegible] the [illegible]

of [illegible], or [illegible], or [illegible]

[illegible] of [illegible], and [illegible]

given with advantage, in doses [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

John H. Gwick

An
Inaugural Dissertation
On
Typhoid Fever
Submitted to the Examination
of the
Provost, Regents and Faculty
of Physic
of the University of Maryland
for the degree of
Doctor of Medicine
By
Thomas D Eubank
of
Virginia

Typhoid Fever.

The origin of the term Typhoid (from τυφος, stupor and ειδος, likeness or resemblance) sufficiently indicates the character of the affection to which it has been applied. It is a febrile affection characterized by a considerable diversity of symptoms, yet presenting certain important features in its course, which serve to distinguish it from all other maladies. The idea once prevalent that it was identical with Typhus Fever, has long since been abandoned; and there is, at present, no doubt whatever existing on the mind of the medical world, that it is an entirely distinct and separate disease from the one with which it was for so long a time confounded, and concerning which it must be admitted that there are points of striking sameness, I refer to Typhus Fever. Though very different in many and important particulars, still the

therapeutical management of the two fevers is pretty nearly the same:- And in this respect the advocates of the identity of the affections did not greatly err. Notwithstanding the similarity of treatment in the two cases, there is a vast difference in the symptoms which are exhibited in the progress of Typhoid and Typhus Fevers, and a not less wide difference in the course and termination of the two allied diseases; the former offering some chance of recovery - the latter scarcely any. With these preliminary observations, I proceed to give the natural history of the malady now under consideration - to state its usual mode of onset - to make mention of the most prominent and characteristic symptoms which it presents - to trace it through its course - to name the supposed causes - nature - diagnosis from kindred affections - prognosis - and lastly the medical treatment employed. And in the first place with regard to its mode of

attack. At times, it seizes on the patient very suddenly and unexpectedly; the victim in the midst of apparent good health is taken down all at once without any warning whatever on the part of the disease. But in by-far the greater number of cases there is a distinct premonitory stage: that is, the open onset of the fever is preceded by the ordinary, precursory symptoms of febrile action; such as general uneasiness, a sense of lassitude - aching in the joints, in a word an entire disinclination on the part of the patient to execute any movement. He feels stupid, languid, and is thereby rendered unfit for the discharge of his accustomed duties. Sooner or later, he is seized with a chill and distinct rigors are not uncommon - disorder of the digestive apparatus; such as nausea and vomiting - a sense of oppression about the head - fulness and other disagreeable sensations which it is not worth time to mention. This constitutes the cold stage. Then follows the hot stage;

which is proportionate in severity to the cold stage. There is quick pulse, hot, dry skin, headache, hurried breathing, with the secretions diminished in quantity, and slight derangement of the stomach; in fact great vascular excitement. After a longer or shorter period, the sweating stage, or that of decline sets in. Now there is an amelioration of all the symptoms: the secretions are restored to their natural, healthy character (only a little more abundant than is natural), headache is relieved, in a word there is a subsidence of all the symptoms. Thus far the course is precisely similar to the paroxysm of Intermittent and Remittent fevers. Though the above is its mode of onset occasionally, still it must be admitted that in by far the greater number of cases it attacks the patient slowly and insidiously; the patient scarcely being able to date back to the time when he first experienced any indisposition. The tendency of the disease from the very commencement is to debility — an utter

prostration of the powers of life; and hence the appellation given to the disease. At its very beginning almost, epistaxis is apt to occur, and diarrhoea not unfrequently sets in about the same time; or if it does not supervene at all, it is an established fact that the bowels are more easily acted on by cathartic medicines than in almost any other affection. The foregoing symptoms are observed in the cold stage. Now comes the hot stage, which is characterized by hot, dry skin, furred tongue, sordes are apt to collect about the teeth and gums — flushed face, suffused eye, quick and small pulse, sometimes rising as high indeed as 140 and even 160 to the minute, there is in short a general exaltation of the vital forces. I should remark that the secretions in this fever as in all others are diminished during the hot stage, but very abundant in the stage of decline. The urine is observed to deposit a lateritious or brick dust sediment on being

allowed to stand awhile and cool. After the hot stage or stage of active excitement has worn off, then the sweating stage sets in with a more or less complete abatement of all the symptoms; but by no means so decided is the remission as that of Remittent Fever; hence one of the distinguishing features of the two diseases. A paroxysm may occur for several consecutive days and each be followed by an amelioration of the symptoms as in the case of the intermittent fever. But soon it merges into a regular continued fever, and is from that very moment characterized by a proclivity towards stupor and debility; which I have before intimated. In this way the disease takes a steady march tending all the while now to a prostration of the vital powers. & a hence the duty of the Physician to watch carefully this symptom in the employment of his remedial measures. It is in truth the most important feature presented in the whole progress of the disease; and to counteract and obviate that debility

should be the physician's chief aim. On the seventh day, sometimes earlier, sometimes later, the "rose coloured eruption" makes its appearance; first on the abdomen of the patient, thence gradually extending to the thorax and extremities, and even to the neck; but they rarely appear on the face. These spots I may say are almost a pathognomonic symptom of Typhoid Fever. They are about a line in diameter - are circumscribed - sometimes perceptible even to the sense of touch. The number is variable, being in some instances few, in others countless. They are observed to disappear on pressure and to return on the removal of the pressure, and which serves to distinguish them from petechiae which also are seen in the progress of the disease under consideration. These latter however are not removable upon pressure, do not project above the surface, and consists merely of extravasated blood. The bronchial mucous membrane is exceedingly liable and likely to be the seat of inflammation

ction in Typhoid fever. There may be merely irritation or congestion, but more frequently the diseased action goes further and sets up confirmed bronchitis. Tympanites is a very common symptom induced, depending upon the large accumulations of wind in the large intestine, and consequently an enormous distension of the abdomen, which gives out a hollow drum-like sound when percussed. This is observed about the close of the first week. There is also hardness of hearing, depending probably on some disease involving the eustachian tubes. This latter however is by no means an invariable symptom. It occurs in the latter stages of the disease. Retention of urine is noticed in not a few cases and at times the bladder is distended to bursting, imperiously demanding the use of the Catheter. The nervous symptoms are very prominent. Headache is rarely, or never entirely absent; it being rather a heavy dull pain than acute. The pain is most common in the forehead and over

the eyes. Delirium also occurs at about the end of the first week, though it may be present sooner. Subsultus tendinum or twitching of the tendons is very common, and a very alarming symptom it is too; one which should excite apprehension on the part of the physician. Restlessness, jactitation, tossing to and fro in the bed — slow muttering delirium, a tendency in the patient to slide down to the foot of the bed (an evidence of muscular weakness). All of these last named symptoms are very characteristic of the closing scene. But by far the most important and frequent symptoms remains yet to be mentioned. I allude to the inflammation and ulceration of Peyer's glands. This is strictly speaking, ~~characteristic~~ a pathognomonic symptom. These elliptical patches of Peyer, are situated in the Ileum, the termination of the small intestine; and are most numerous in the neighborhood of the Ilio-cecal valve. Hence they are in

the right iliac region, and pressure in that region, sometimes in the course of the second week, will reveal the character of the affection you are called upon to treat. Pressure over the region in which they are located gives rise to great and almost intolerable pain, and then you may be sure that you have the disease in question to deal with. This symptom should excite great anxiety and solicitude; for it is certainly a very unfavorable augury in the history of the disease, and one which should influence your prognosis of the malady, and which will tell immensely to the likelihood and danger of a fatal issue. If ulceration takes place the patient's chance of recovery is dark and gloomy. There is an immediate escape of the contents of the bowels, - violent peritonitis is set up, and next is the undertaker. Inflammation of the mesenteric glands opposite to these patches is likewise a uniform symptom. Anatomical Characters. -

It is stated by those who have had ample opportunity to judge, that there is scarcely an organ in the whole body, which has entirely escaped diseased action, — scarcely one which exhibits no trace of inflammation after death. But by far the most common lesion is the inflammation and ulceration of Peyer's elliptical patches. These latter rarely, or never escape, intact. Nor though it is possible they may, which is seldom the case, yet there is every reason to believe that these glands were implicated in the disease. I do not mean to say, nor do I wish to be understood as endeavoring to convey any such idea, that inflammation of these patches constitutes a part of the disease; because I know this opinion is not adhered to among pathologists generally. But it is merely an effect and an attendant upon the disease and not, as was once supposed, a part of the disease, itself. — So also are the solitary glands of the Ileum [illegible]

the seat of inflammation. They are so much enlarged that they become visibly visible, and the result of the inflammation is either softening, induration or ulceration. These glands though, are not near so often inflamed as are those we have just been speaking about. The Spleen, the liver, and other organs are enlarged, softened or indurated. The spleen is said to have attained four or five times its ordinary bulk, and to have become soft and jelly, so that the finger could be thrust through it without any difficulty. Causes. – Nothing definite is known respecting the causes of Typhoid Fever. It is generally in thickly, densely crowded Cities that we see its ravages most fearfully committed –, among those who are in the habit of breathing impure, confined, and vitiated air, among that class who live on insufficient and unwholesome food – where filth is allowed to accumulate in great abundance. Hence to sum up the causes, impure and confined air, filth, insufficient and unwholesome food constitute

the most important. It breaks out in crowded hospitals, prisons, camps, ships and other crowded and illventilated places. It may, and does make its appearance however, even among persons breathing the pure and wholesome air of the Country. And its devastations among those living in, and respiring, the sweet, balmy and mountain air of Albemarle County, Virginia, are fearfully many. The students of the "University of Virginia" are not unfrequently attacked by Enteric Fever: And the citizens of the town of Charlottesville are known to be exceedingly obnoxious to its destructive influence. Thus it is limited to no one location, but is recognized far and wide. The Autumnal and Winter seasons are most favourable to its production. It is supposed by some pathologists to be contagious; but experience and observation both go to prove that if it exists, it enjoys this property to a little extent only.

Nature.— This disease was formerly supposed to be many

gastro-enteritis:- but it is evident that in many cases there is not the slightest degree of inflammation lighted up in the stomach. Post-mortem examinations have satisfactorily proved this organ to be entirely exempt from disease in many instances. That condition of Peyer's glands about which we have before spoken at great length is the phenomenon we most frequently meet with in a typhoid fever. These patches are rarely, indeed, if ever, free entirely from morbid action. And the erroneous and absurd opinion has been held by some pathologists, that the whole train of evils consequent upon this affection was connected with, and dependent upon, the diseased state of these glands; just as in pleurisy the whole trouble is owing to the inflammation which is resident in the investing membrane of the lungs and ribs, the pleura. But such an opinion is unfounded, as the morbid condition is known and admitted not to exist until some days subsequent to

the onset of the fever. The inflammation is [illegible] and recognised as a symptom, and not a constituent part of the disease as was once supposed. —

Diagnosis. — The slow and insidious mode of attack, the dull and heavy expression of countenance, the occurrence of diarrhoea at the beginning or soon afterward, the quick and small pulse, the general debility, epistaxis at the very onset: these symptoms together with the "rose coloured eruption" on the seventh day, dryness of the tongue, and diminution of the secretion, cough and bronchial rales, distended and tympanitic abdomen, deafness &c, serve to distinguish this fever Bilious Remittent fever, with which it is likely, at times, to be confounded; and on dissection the condition of Peyer's gland will serve to distinguish it from Typhus Fever; this latter, disease being that for which it is most apt to be mistaken. —

Though little or no difficulty will be experienced if a strict

attention is given to the symptoms in the two cases. After death the diagnosis between typhoid and typhus is easy. The latter disease, never producing or affecting that well known condition of the ileo-cæcal potche so common, and so fearful a symptom in the former affection. Prognosis.- Though a serious disease, yet it does not always prove fatal. The prognosis should always be considered grave and unfavourable, if at any time in the progress of the disease, we have evidence of the ulceration of Peyer's glands. For this is certainly a dangerous symptom, and one which should excite not little apprehension on the physician's mind. Hopeless almost is the condition of the patient upon the supervention of this state of things: and it must be admitted that our art is, I may say, incompetent to do anything towards removing so appalling and terrible a symptom. It is in fact the presence of this symptom, that the medical man most fears and dreads.

Dr is one of those complaints, however, which puts on very different degrees of violence under different circumstances. Out of 140 cases observed by Louis, who had ample experience and observation on the subject, and on whose statement we may rely with safety, 42 or more than one-third terminated fatally; while in 134 treated by Pidduck, there were only 19 deaths, or about one-seventh. — No case though should be looked upon as absolutely desperate; And this, let me say, is a rule that should always be observed in medicine. Viz: "that there is hope so long as there is breath". This truth should ever be fresh in the memory of the practitioner of medicine, never to give up a patient, or say that his chance is hopeless, until you have the most unequivocal evidence that such is really the case. Dr Wood says there are few diseases serious in their nature, which exhibit more happily the controlling influence of treatment than the one now under

consideration. — I have given the symptoms, course, the anatomical characters, causes, nature, diagnosis and prognosis, and I now proceed with the treatment. — There are in the therapeutical management of Enteric Fever four indications to be fulfilled: 1st to remove all sources of irritation whether local or general: 2nd to subdue any undue excitement: 3rd to support the failing powers of the system, and 4th to meet and combat any untoward symptom that may perchance arise in the march of the disease; such as excessive headache, convulsions, stupor, coma & bronchial irritation or inflammation. As there is most always diarrhoea in the beginning, I should hardly think it judicious to premise the regular treatment by a cathartic. But should the bowels show the least tendency to constipation, an aperient of Epsom Salts or of Castor Oil should be administered. It is rarely indeed, if ever necessary, to take blood from the arm in this disease: because it must

be remembered that its proclivity is to debility all the time: And this I may say is the all important symptom to be watched for, and the — in the body to manifest its presence, should be met and dealt with stiffly. The indication to unbrace the bowels being now fulfilled, it is our object next to obviate the febrile symptoms. And this is accomplished by refrigerant diaphoretics; such as the Citrate of Potash in the form of neutral mixture or effervescing draught. When the skin is hot and dry cold ablution upon the surface, sponging the body with cold water. When the nervous symptoms begin to appear, and if there is no stupor or determination of blood to the brain, opiates may be very useful, camphorated spirit of Nitric Ether. Hoffman's anodyne —, Camphor water. Dover's powder is very useful when there is much restlessness, drowsiness and when a diaphoretic agent is desirable at the same time: given just before bed time. When there is

much tenderness over the region of the abdomen, a mustard plaster, or large mush poultice put on and left there for several days. Sometimes when the pain in the right iliac region is intense, leeches may be very beneficially applied to the neighborhood of the affected part. – Mercury is also a valuable medicament in typhoid fever, when at any time we have proof of the derangement of the liver, or of any of the secerning organs, calomel becomes necessary. But the main object to be sought after and accomplished is to counteract the tendency to stupor. Stimulants in the latter stages of continued fever are imperatively demanded, and occasionally the most powerful of the class become applicable. Hot brandy, wine, oil of turpentine, cayenne pepper and mustard rubbed on the extremities and over the surface of the body. Dr Wood lauds very extravagantly the oil of turpentine in this fever. – Dr Gregg terms is a particular form of fever usually attended with much danger in which the remedy has been found uniformly successful:-

this is in the latter stages of typhoid fevers or lingering remittents, "in which the tongue having begun to throw off its load of fur in patches, has suddenly ceased to clean itself, and become dry and brownish. The skin is at the same time dry, the bowels torpid and distended with flatus, and the patient sometimes affected with slight delirium. Under the use of small doses of turpentine, frequently repeated, the tongue becomes moist and again coated, the tympanitic state of the bowels disappears, and the patient goes on to recover as in a favorable case of fever". I have no doubt that the oil of turpentine is an invaluable remedy in this affection; and I think it well worthy the respect and trial of all. If it has proved to be so beneficial, and such a sovereign remedy in Dr. Wood's hands, I see not why others should not be equally as successful with it. Attention to the diet is all important in enteric fever. In the early stage this should be light, consisting of nothing but the

most nutritious and easily digestible articles, and very little of this even is requisite. Solution of gum arabic, barley water, rice water, toast and weak tea, tapioca, sago, arrowroot, molasses and water, vegetable jellies mixed with water, gruels made of oatmeal and Indian corn. The patient should eat very little of anything. But after the system is worn out by the ravings of the complaint, then the strength must be kept up by more substantial and nutritious articles. With these considerations I conclude the subject of typhoid fever.

Thomas D. Eubank

An Inaugural Dissertation on Menstruation

submitted to the examination of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the Degree of
Doctor of Medicine

by

A. W. Dorsey
of
Maryland

1857.

Menstruation.

There are epochs in the lives of all; Events, that are ever changing the swift current of life: Some marking its future course with a happy murmer, some lashing its into a tempestuous roar; and others calming its billows into peace and quiet.

With the youth the day that frees him from the tedious and arduous duties of College life: With the young-man the birth-day that bestows upon him the sacred and unalienable rights of a free american citizen; the hour that his name is first placed before the world, as the Proffessional Character, the merchant, or the Mechanic; or the day that ~~his name~~ it is emblazoned upon the "Temple of Fame", or is crowned with honor by the laudations of the great and the good.

With the young girl the period she blushes into womanhood;

with the young woman, the hour she becomes the idolized bride or the adored wife. With the wife, the anxious, the dreaded, but yet the happy day, she becomes a Mother; and first tenderly presses her first-born to her bosom!

With woman, the first period is really the most interesting and important; as then such changes occur, as foreshadow life with cheerful aspirations, or gild it with bright hopes and glowing anticipations. This epoch is the period of puberty, and the phenomenon that announces it Menstruation!

In every young woman, in whom there is no mal-formation of the Generative Organs, and whose general health is unimpaired, there occurs sooner or later in life a sanguineous flow, called the Catimenia or Menses. The time of its first appearance varies; and may be influenced

by race, climate, mode of life and condition of the Constitution. The colder climates have been supposed to considerably retard, and the warmer to promote its early appearance. This opinion is correct to only a limited extent, and has been modified by more extended observation.

Cases are recorded of females in the warm climates of the East, becoming mothers at the age of ten or twelve, and ceasing to bear children at twenty five; whilst in extreme northern latitudes, they are reported not to menstruate until twenty five or thirty and to continue prolific as late sixty. That such cases have occurred we have every reason to believe; but should they not be regarded rather as anomalies, and exceptions, than as a general rule; or as a standard of comparison? The time of the catamenia's first appearance may vary in

the same latitude. But here station and mode of life are often the controlling influences. Those whose condition subjects them to frequent and familiar intercourse with the low and vulgar of the male sex, who ponder over lascivious novels, whose imaginations are corrupted by obscene sights, or whose persons are handled with freedom; generally menstruate much earlier than the young girl who is under parental restraint; whose association is with the virtuous and refined; and whose pure mind is retained uncorrupted in thought and action.

Race, has been supposed to exert its influence; and I believe it is now generally conceded, that the African is earlier subjected to the change than the European. Many not this seeming be attributed more to the mode of life, habits, and other influences to which

she is exposed than to any inherent Con=
=stitutional peculiarity, as has been thought.

The state of the Constitution may retard or promote the development of the function. The Strumous Dia=
=thesis is known to exert some peculiar and unexplained influence upon the mental faculties of children. With such the intellect often prematurely bright=
=ens, the perceptive faculties quicken, and the child not unfrequently becomes the wonder of friends, and the pride of parents.

Alas! too often is this precocious ness but an evidence of a canker within, that soon=
=er or later will blight the hopes of friends, and destroy the gifted and beautiful.

In such constitutions the early development of the corporeal system is often as remarkable as the mental changes, and we not unfrequently find the child sud=
=denly springing into womanhood, with

the Menstrual flow fully established.

The temperment of such girls, is usually sanguine; their imaginations lively, and their affections warm and confiding.

In the cold and phlegmatic, the function is often retarded, and may be as remarkable for its late, as the former for its premature appearance.

Although we thus see many circumstances that may influence the period at which the first flow of the menses occur, yet we find upon comparison of a large number of cases, that these variations are not so frequent or general as might be supposed.

Statistics show the average age at which the change takes place in this country to be between fourteen and sixteen, sometimes as early as twelve or thirteen, and in others postponed as late as sixteen or seventeen. The period whether early or late is called the Period of Puberty,

and announces to the young girl and her friends the commencement of a new and interesting epoch. It proclaims the dawn of woman-hood, and a capacity in the female of performing the duties of a wife and a mother.

When the flow is fully established, it recurs at regular intervals of four weeks or twenty eight days, and usually persists for thirty years. During this time the woman is considered capable of impregnation, and upon its cessation to become unfruitful. This would seem to be a wise provision of Providence, by which the time of youth and maternal woman-hood is given her to bring forth, watch over, and direct the tottering steps of childhood; and while health is vigorous, and the constitution strong and unbroken to bear up under the solicitudes and cares of a mother; and

at last when enfeebled by age, to be no longer subjected to the many duties of the young mother, for the performance of which she is then inadequate.

The period of its cessation, is called the "Critical period" or the "turn of life" from the supposition that at this time, women are more liable to serious attacks of disease, and which are then more likely to be tedious and more generally fatal.

Observation however has shown this view as regards a general application incorrect; and it is now believed that not more females die at those particular ages than those of the other sex. The period of cessation varies, as the woman's menses first appeared early or late, ceasing, as we have previously stated after thirty years duration.

The symptoms that first announce

the approaching change, are an irregularity in the periods of return; sometimes a suppression for several months, then a recurrence every two or three weeks, with a scanty flow, or at other times a profuse discharge amounting to a hemorrhage. These symptoms may often be accompanied by some derangement of the general health, but not unfrequently give rise to no discomfort.

The regular recurrence of the Catamenia every twenty eight days is subject to variations.

In some women it appears to the very day or even hour; in others, anticipating a day or more; or postponed for several. Generally however the interval whether long or short, does not fluctuate in the same woman, but preserves its regularity; unless interfered with by Gestation, Lactation or Disease.

The duration of each period varies from three to six days or perhaps longer, during which the quantity of blood lost fluctuates between four and eight ounces.

The amount is considerably influenced also by temperament, climate, habits and constitution. Every woman in this particular is a law to herself, and therefore it would not be proper to take the amount lost by one, as a standard by which to judge of what would be natural in another. What would be considered a suppression in one, would amount to a hemorrhage in another, and yet the function be healthfully and naturally performed by both. The quantity however cannot vary materially at different times in the same woman, without some derangement of the function, and also impairment of health.

Climate no doubt exerts considerable

influenced in this respect, and it is now a well ascertained fact that with the women of Southern lattitudes the menses flow more abundantly. This is attributable to the greater laxity of fibre, induced by the higher temperature, and also to the more luxurious life of the south, than is enjoyed by the women of the north.

The whole quantity lost does not flow at once, but begins at first by a scarcely perceptable oozing from the genitals of an albuminous fluid, stained by streaks of blood. This becoming gradually more fluid increases in quantity for a day or two, and then diminishing again by degrees in amount, and assuming its pale character, at last ceases, and the woman is said to be well. Sometimes the flow is interrupted by the recumbent posture, but appears again, frequently in con=

=siderable quantity when the woman arises in the morning. It then is not un= =frequently discharged in clots, acc= =ompanied by some pain.

Having thus cursorily glanced at some of the most important points connected with this great function, we will now attempt the consideration of some of the Physiological changes that occur before and after the first menstrual period.

To properly appreciate these changes, we must first consider what organs are essential to, and how they contribute to the regular and normal appearance of the Catemenial flow. The female organs of Gen= =eration are very properly divided into the External and internal; the latter com= prising the Vagina, Uterus and its ap= =pendages, the Fallopian Tubes and Ovaries.

These are play some part in the performance of this function, but it is the

Ovaries and Uterus that contribute most essentially to its production. This is proven when these organs are congenitally absent, by the Menses not appearing, or when they become the seat of disease the function is seriously deranged and sometimes entirely arrested. Before the age of Puberty, the Ovaries contain numerous small vesicles, called Graafian Vesicles, from them being first described by De Graaf. —

As this age approaches, some of these vesicles are observed to increase in size, and the Ovaries themselves participating in these changes become better developed. The Uterus also undergoes corresponding changes, increasing in size, and becoming more vascular. When the time at last arrives for Nature to effect her change, and for these Organs to exercise their function; one of these small vesicles more mature than the others, is observed

to leave the centre of the ovary, and rising to the surface, puts upon the stretch the membranes that enclose it, and finally bursting from its envelope is discharged. During this process the Ovaries become the seat of Congestion, and extending their influence to the Uterus, stimulate this organ in such a manner as to cause an afflux of blood to its walls, and especially to its Mucous Membrane. This hyperæmia of the Uterus continues to increase, the Mucous Membrane at the same time becomes thickened and softened, from which at last is secreted an albuminous fluid. This flowing externally is frequently the only show the young woman has for several successive months, approaching puberty. It is called the white discharge and may frequently be remedied by good diet, tonics and exercise, so that in a few months the discharge

shall assume its proper color, and the flow be fully and regularly established.

It has been a subject of protracted controversy among the learned of the Profession, whether the discharge was a secretion from the Uterus, and whether it consisted of altered or normal blood. Its loss of coagulability, peculiar odour, and color led many to believe it a secretion from the Mucous Membrane, and such was the general opinion until a few years since. Later observations and experiments however prove it to be, pure unaltered blood. When collected as it flows from the Os Tincæ, it presents all the characteristics of the Vital fluid, and it is only when mixed with the acid secretions of the Vagina, or is retained long within the Cavity of the Uterus that it presents the peculiar properties upon which the old opinion was founded.

The general symptoms preceding and accompanying this change are slight in some, well marked and even painful in others.

Generally however there is a certain degree of languor and lassitude, fatigue after ordinary exertion variable spirits and temper accompanied by head-ache, pain in the back and loins, sometimes extending down the thighs, heaviness and sense of weight and uneasiness in the hypogastric region, shooting pains in the mammæ, together with a diminished or capricious appetite.

Occasionally there is a smart attack of fever, with all the foregoing symptoms aggravated, demanding the services of a physician. They are all mitigated or entirely relieved as the flow increases and the function comes to be fully established.

The amount of suffering during the first menstruation should not be taken as a criterion by which to judge future periods.

as each subsequent one is likely to be attended with less distress as the system accomodates itself to the change. Whilst the internal organs are undergoing these changes, the external will be found to participate in them. The vulva becomes enlarged, the, the Mons veneris covered with hair, and the vagina increases in dimensions. In all of them we recognise a preparation, by which these organs are fitted to perform the functions that nature designed.

If the changes in the Generative organs have been remarkable, others occur in the young girl equally as important and interesting. The little girl who before this period romped with the youth of the other sex; whose merry laugh would ring upon the evening air as she bounded from the school room, no longer engages in childish sports or allows the freedom of her school companions. She who would

sit unabashed upon the knee of her brother or throw her arms around a cousin's neck, now bashfully retires from the admiring gaze of a lover, and seeks to conceal her charms behind the veil of modesty. The dark eye that was always bright, flashes with greater brilliancy, the softness of her cheek mantles with a richer and deeper blush. Her childish voice, assumes a softer melody, and all her features a more womanly expression. The unshapely form of the girl grows into beautiful proportions, the person rounded and graceful, the mammae become enlarged and the skipping step of girlhood is exchanged for the elastic and more dignified step of womanhood. The mental faculties are capacitated for a higher enjoyment, and are interested in more womanly pursuits. These changes are frequently rapid and

striking and, ~~xxxxxx~~ occurring at this particular period, indicate to the world her fitness for the station and duties that her Maker intended she should assume.

Such are some of the Physiological changes observed when menstruation has been fully established in the healthy female. But there are many circumstances that may interfere with the process, retarding its appearance and sometimes preventing it altogether. Among the most important of these is mal-formation.

The Ovaries may be absent or atrophied, and in this case none of the changes we have specified will occur. The other genital organs will remain undeveloped, and the young girl instead of gliding into the graces of woman-hood, comes to resemble the sterner sex. Should the Uterus be absent, and the Ovaries perfect; no discharge will take place, but there

will be an effort to menstruate at each month, characterised by all the pre-monitory symptoms that are observed when both organs are perfect. Thus we recognise the Ovaries to be the stimuli, the Uterus the organ from which the flow takes place, and a necessity of both for the proper fullfilment of the function. It has been supposed by some that the discharge was directly from the ovaries, resulting from the rupture of the Graafian Vesicles. This view is no longer entertained, modern Physiologists having seen the blood oozing directly from the softened and congested mucous membrane of the body of the Uterus. This membrane is now thought to be thrown off during each menstrual period, but further observations are necessary to establish this view beyond cavil. The Vagina may be congenitally absent and thus prevent the flow

externally, or the hymen imperforate with a like effect. In such cases there is always more or less suffering each month, and unless an outlet be afforded by the surgeons knife, or nature establishes a chan=
=nel the health of the woman suffers, and death becomes a relief. Even here nature often proves herself adequate to the task, and will establish a flow through some other organ. The Lungs, the Kidneys, the stomach, and ulcers have all been the flood-gate through which the have=
=lived herself for years, and that too without any apparent evil effect upon the constitution. When Menstruation thus occurs it is said to be vicarious.
Many other causes may prevent the estab=
=lishment of this function, or may interfere with, or suspress it during life. So in=
=timately, indeed is it connected with the whole female economy, blended so

closely with the other functions, either directly or by sympathy, that whenever it is not regularly or healthfully performed the whole organism is likely to suffer, — and when disease fastens upon remote organs, it in turn becomes reciprocally affected and more or less deranged. We thus see that an irregular or unhealthy performance of this function may be, and often is the cause of ill health and disease, and yet we believe it is oftener the effect than the cause, or in other words, only a symptom of disease existing elsewhere; and that remedies are too often directed against it, when if employed at the proper seat, the alleviated trouble would cease — Upon the final causes of Menstruation there have been and still are conflicting opinions,
Dr Dewees the great American Obstetrician and author thought the function "in some way or other connected with the capacity

for impregnation" More modern observers think differently, and have cited cases of impregnation before its occurrence, and others where the menses appeared for the first time during gestation, thus endeavoring to show its absence is not a proof of the incapability of a woman conceiving. Instances also have been cited of healthy menstruating females being untruitful. Such cases we have no doubt occur; but should they not be regarded rather as exceptions, and not to invalidate a rule that seems to be so universally observed. May not the barrenness in these cases be more justly attributable to unsuitable marriages, disparity of age or constitution, or perhaps some defect in the male generative organs. Cases have also occurred where a couple have been unfruitful together, yet both proved their virility with other individuals. Here we might have been led to suppose

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the woman incapable of impregnation, had not accident proved it otherwise.

We therefore think ourselves safe in adopting the view that the regular and healthy performance of this function indicates ~~the~~ a healthy condition of the generative organs and their capability of impregnation, whilst the cessation of the menses denotes the loss of such capability.

Whatever there may be the exceptions, and apparent anomalies, every day experience teaches us that as a general rule, ~~the~~ its regular appearance in time & quantity is requisite to the enjoyment of good health, and to render the female capable of becoming a happy wife and mother. Then whatever shall prevent, obstruct or retard its first appearance, or derange it when established, becomes a matter of important consideration to the intelligent Physician, and demands his early and serious attention.

A. W. Dorsey

Dec. 18 1856

An.

Inaugural Dissertation

on.

Typhoid Fever

Submitted for the Examination

of the

Provost, Regents, and Faculty

of the

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for the

Degree of Doctor of Medicine

by

William T. Bowdle

of

Maryland

1857.

Typhoid Fever.

There is probably no disease with which nosological writers are familiar, more pregnant with interest to the Physician than that of Typhoid fever. A disease which has spread far and near its baneful influences, and swept from our land the fairest portions of humanity; regardless of sex or condition; taking in its course the young and old; the rich and poor manifesting its influence on the beautiful and gay as well as upon the old and decrepid; such a disease must of necessity be very interesting, especially to the country practitioner whose chance may have thrown into a locality in which this disease is prevalent. I am induced to write

on this disease, because I have passed the greater part of my life among a population especially exposed to its predisposing causes; and among whom it has extensively prevailed. I have consequently witnessed its serious phenomena during its recognized stages, and studied with great interest its changes, its mortality, and its more frequent terminations in health. Although a complex disease and in many cases obscure, its diagnosis is for the most part readily and easily made out. Its natural history has been fully investigated and revealed. Its symptoms its lesions, its causes have been I think satisfactorily ascertained, and have been

faithfully compared with the symptoms, lesions and causes of other diseases. These considerations have induced me to write on this disease, believing that I can not only place before your honorable body, the general characters which distinguish and mark this disease as laid down in medical works, but also add something of interest which the experience of others has brought before my view.

The name for this affection has been a point of dispute and argument with nosological writers since its first accession. Petit and Serres described it in 1813 under the appellation of Entero-Mesenteric-Fever. Bretonneau called it Dothienenteritis from the pustular in-

flammation of the intestine. Cauvil here and others have called it as follicular Enteritis Bouilland called it Typhoid Entero-Mesenteritis It has been called by others Nervous Fever, Gastric Nervous fever, Typhus and suppuration of the Intestine, and thus it has been variously named by the various Medical writers according to what they supposed to be the cause and seat of the disease. All of which I think are objectionable. The New England writers called it Typhus fever. but as this disease was found to differ from the Typhous of British writers, it became manifestly necessary to apply to it some other appellation to distinguish it, it consequently received from Louis

Gerhard and Jackson the name of Typhoid fever the Greek ending ΟΙΔΟΣ signifying a likeness to Typhus fever. I shall adopt this name believing it more expressive and less objectionable than any other. The character of Typhoid Fever, its symptoms, lesions etc. were first carefully studied by physicians on the continent of Europe. The first description in any manner complete was given by Prost in 1804. After a few years Broussais brought forth his beautiful but erroneous description, and under his tyranny and dominion the study of this disease was misdirected. Every thing for a time gave way to the bold effrontery of the dogma that

fevers are dependent upon local inflammation. The absurd and ridiculous views of Broussais were completely and successfully confronted by Andral and other Pathological writers; but it is to Louis that we are indebted for the first correct description of Typhoid Fever. It is in truth so complete and so comprehensive and so correct that very little information from that time until the present has been added to what that indefatigable and energetic Louis first described

There is a great difference in the different cases of this disease with regard to its suddenness and violence In a great many instances it is

impossible for the patient to fix the precise period at which the disease commenced. He cannot often inform us in what that sickness consists. He may have felt mental languor, indisposition or inability to accomplish his usual amount of labor. He may have had pain in the head and limbs and chilliness alternating with heat. This obscure condition of ill health may continue for one or two weeks with little change; but generally there is a continued increase in the severity of these sensations until the more characteristic phenomena make their appearance which inform us as to the nature of the malady. Wherever be

be the mode of attack, whether slow, insidious and creeping, or from the beginning treacherous violent and severe. the disease marches on with slow but certain strides for a considerable time, producing phenomena more peculiar to this than to any other form of fever. In detailing the symptoms of this disease I shall first speak of all the symptoms that may be expected in a well developed case, and afterwards speak of the more important symptoms seperately. and shall divide the regular course of this fever into three stages or weeks, not that it necessarily runs its course in three weeks, but for the purpose of classi-

fying the symptoms in their appropriate order as well as make plainer and facilitate the study of this malady.

With or without the premonitory symptoms. this disease begins frequently abruptly with a chill followed with the usual symptoms of fever. There is increased frequency of pulse and heat of skin thirst, headache, and throbbing of the temples. The pulse as a general rule is accelerated, but in some cases there are exceptions in which it is slower than natural. It is however greatest in those of irritable constitutions In young, persons and females it will speedily rise to 120 or 125 pulsations in a minute, while in

the stronger adults it will be only 100 during the entire disease. The skin is in this period hot and dry and feeling to the Physician hot and pungent. Thirst is very troublesome for the first three or four days; the tongue is clammy, sometimes clean and moist, more often furred. Epistaxis is a frequent symptom. In many instances especially in a Miasmatic locality the disease has a tendency to remission and the exacerbations frequently subside in slight perspiration. There is at the same time diseased action going on in the abdomen. Diarrhoea is sometimes an early symptom but is more frequently postponed to the

second period. When it does occur the stools are loose and frequent and either of a dark colour and fetid, or of a yellow ochre appearance. If pressure is made on the abdomen it is found hard and resisting, moderately tympanitic, and a little gurgling movement is discovered produced by the intermixture of liquid and gas within the bowel, and uneasiness is almost always manifested when pressure is made over the Ileo-Cæcal glands. A cough frequently sets in either dry or accompanied with a slight mucus expectoration, and the signs of Bronchitis or Pneumonia are detected by auscultation. The

urine is little changed, sometimes scanty, high coloured, and offensive. Such is the course of the disease until the seventh or eighth day of complete formation. Other symptoms are now superadded The Tongue at first moist and clammy often becomes dry and brownish. Deglutition is painful and difficult. The abdomen is obviously distended so as to present a convexity from the ensiform cartilage to the pubes and upon percussion is tympanitic. If the Skin be carefully examined a red, lenticular Eruption is seen resembling flea bites, showing themselves first in small numbers upon the abdomen and afterwards increasing

extends to the chest, limbs, and face. Vesicles or Sudamina at the same time appear upon the neck and chest. The nervous symptoms now assume a more decided character. The headache disappears and delirium takes its place, as also stupor. Sometimes furious harasses the patient. The eyes are injected, and the tongue is protruded with difficulty and is observed to tremble in the effort. If the disease continue a typhus condition is developed. The tongue is encrusted with a brown or black coating or is dry, glazed, and sore while dark sordes collect about the lips, teeth and gums. The skin

is either hot and dry or is hot in some places and cold in others. and a peculiar disagreeable odour exhales from the surface which is described as stale and cadaverous. Subsultus tendinum and Epileptiform convulsions make their appearance. The patient is feeble and there is a constant tendency to slip down to the foot of the bed. He picks at the bed clothes or at imaginary objects in the air, matter half formed. delirious sentences or exhibits a profound coma. and sometimes in his delirium, rises from his bed, walks across the floor and falls exhausted. Other occassional symptoms are. involuntary evacu-

nations, and hemorrhage, and the appearance of petechia and vibices. Vitality is so feeble in the skin that blisters often produce sloughs, and gangrenous ulcers are produced on parts exposed to pressure. If the case is to terminate in death the pulse gives way and becomes either excessively frequent and fluttering or slow and scarcely perceptible. The extremities become cool and the surface bathed in a cool, clammy, perspiration. The patients countenance assumes the Hippocratic aspect, and life is almost insensibly extinguished. If the case is to terminate in health, the tongue becomes moist and clean, throwing off its fur from

the tip and edges; the pulse is less frequent and becomes full and stronger; the hitherto parched and dry skin relaxes, delirium and stupor subside. the patient becomes more intelligent and is an observer of what is going on around him. The abdominal distension diminishes or wholly disappears. and the patient has a voracious appetite. Convalescence in such cases speedily takes place and the patient is soon restored to his accustomed health and strength. Emaciation now is more perceptible than any time previous. There are cases in which the disease has been protracted and severe, the tongue parts with its fur in flakes from the centre leaving the surface red and shining; the velum Pendulum and half arches will be found

covered with an exudation, with which it is beginning to part. In some of these cases the tongue having become clean coats itself over again, and again becomes clean and this may frequently occur. Sometimes an aphthous exudation appears upon the surface. Under these circumstances we know that the disease is aggravated from increase of intestinal disease. In these long cases boils and painful abscesses break out which harass the patient not a little. He is sometimes left with impaired hearing for a considerable time, or with impaired vision amounting sometimes to total blindness, or is thrown into a childish indifference, and impaired mind sometimes amounting to insanity.

The patient most frequently loses his hair, which however soon grows out again. and the palms of the hands and soles of the feet are apt to or do desquamate. There is one other form of this disease which it is necessary to notice. The patient is suddenly surprised or seized in the midst of convalescence with rigors. excruciating pains in the abdomen inability of extending the limbs, a contracted pulse. nausea, vomiting and constipation. A collapse of the surface and circulation precede death which usually occurs within two or three days. The cause of these symptoms is perforation of the intestine and the escape of its contents into the peritoneum producing peritonitis

The duration of this disease is various. Death sometimes takes place as early as the seventh and ninth days. It most frequently occurs in the second or third week, and sometimes not until the end of six or seven weeks. The average duration is the twentieth to the thirtieth days.

Diarrhoea is an almost universal symptom having been absent but in three cases seen by Louis. There may be only one or two stools or there may be ten or twelve a day. They are of a yellowish color and of healthy consistence. This symptom is generally attended by pain in the abdomen.

Tympanites is a common attendant on this disease, commencing about the seventh day, is at first slight, but gradually

increases until it presents a convexity from the ensiform cartilage to the pubes sometimes being so enormous as to interfere with respiration, by its pressure upon the diaphragm, preventing also evacuation of the bowel by its enormous distension.

The lenticular rose spots is a pathognomonic symptom of Typhoid fever and when it does appear, as appear it will during the disease, we can safely and readily make our diagnosis So common is this eruption in Typhoid fever, that it has received the name of Typhoid Eruption - having been seldom seen in other diseases. It consists of a red spot something like a flea bite elevated a little above the surrounding

skin. and of a rose colour. When pressure is made on it - it disappears, appearing however when that pressure is removed. They are found on various parts of the body, but are more frequently found on the chest and abdomen. The usual appearance for them is the second week of the fever.

Besides or Bubonina also appear in the progress of this disease, and in shape and about the size of a pin's head. They are formed by the presence of a limpid fluid elevating the cuticle. In order to be seen they must be looked at obliquely. They make their appearance later than the rose spots - Cough and bronchial rales may also be

observed in this disease the cough being either dry or attended with mucus expectoration. The dry sibilant and sonorous rales may be heard over the thorax. affording when they occur valuable diagnostic signs. Occasionally these signs give place to a crepitant or sub-crepitant rale. indicative of inflammation of the parenchyma of the lung. The pulse is mostly frequent and sometimes full and strongsome. Times from the commencement feeble and slow. In the last stage the pulse is often fluttering and intermittent

Hemorrhage is a not unfrequent symptom and occurs both from the nose and bowels from the former occasioning little alarm but when there occurs hemorrhage from the bowels. the case is then dangerous.

and the stools should be frequently examined so as to observe whether there is any tendency to hemorrhage. Sometimes also there is a hemorrhagic diathesis when there will be a pouring of blood from the nose. bowels. uterus. gums. stomach etc. and even an oozing of blood from the skin. The nervous disorder is almost always present and marks this fever. Headache, Subsultus tendinum muscae volitantes. Hippocratic countenance etc. are all very prominent and important symptoms and should receive the prompt attention of the physician. Retention of Urine is a frequent effect of the advanced stage and the enormous distension of the

abdomen will make it difficult to examine the bladder aside from the catheter, and the physician will often be deceived by the frequent stillicidium of urine taking place. He should hence be on his guard, and be able to remove this source of uneasiness and trouble.

Lesions.

There is scarcely an organ in the body which does not suffer from this peculiar poison. But there are certain anatomical changes which are especially characteristic of Enteric fever and are so very seldom - if ever - wanting as to be considered essential. Such is the affection of the Elliptical patches of Peyer at first

the patches are observed to be thickened and elevated above the surrounding membrane. The largest are from two to three inches long and from a half to an inch broad; some are dark red, some pale; are hard or soft, varying in number from one to thirty, averaging from ten to twelve. They appear on the surface of the intestine opposite the mesentery. The hard patches undergo resolution or ulceration, the soft always ulcerate. Perforation of the intestine is produced either by ulceration or mortification of the peritoneal membrane. The ulcers are by no means necessarily fatal. They may take on a healing process by filling

with granulations and the surface being covered with a new mucous membrane. The glands of Brunner in the Glandular Portion are sometimes affected These glands are situated in the duodenum. The mesenteric glands are also sometimes affected as well as the Oesophagus-pharynx. oesophagus, gastric mucous membrane duodenum and colon. The spleen is almost always altered, and the Kidneys, heart, and brain show evidences of inflammation. The blood drawn differed materially from that drawn in health. It coagulates firmly and has no buffy coat. It contains more fibrin than healthy blood—

-Causes-

Nothing is positively known of the cause or causes of typhoid fever. repeated chemical analysis as well as the greatest power of the microscope have failed to enlighten us as to the cause of this malady- It is often contracted in situations where a great number of persons are crowded together in ill ventilated apartments. Hence it is found most abundantly in ships. hospitals and large cities. It prevails sometimes epidemically in Country places, but much more frequently endemically- Some persons are much more susceptable to the poison than others. and as a general rule occurs but once in

the same person. It may occur in all seasons but is more prevalent in autumn and winter. Exposure to the sun, vicissitudes of the weather mental disturbance, and debility act as exciting causes. It is believed to be non-contagious and is produced by a specific and peculiar poison, the nature of which has not yet been explained.

— Diagnosis —

In the commencement of Typhoid fever there is a difficulty, nay, in some cases an absolute impossibility to distinguish this, from other diseases possessing similar symptoms. It is difficult to distinguish the first

stage of Typhoid fever from Remittent fever. I have seen the disease so similar in their symptoms as to be wholly unable to say whether the patient were laboring under the one or the other. It is generally however distinguished by the Remittent from having distinct Remissions. by the Bilious vomiting and icterous hue of the skin. and by the absence of Epistaxis, habitude of mind, inexpressive countenance diarrhoea, tympanitic abdomen. and when they occur the rose spots. which are pathognomonic of this disease and from which we can pronounce with perfect safety and

correctness the nature of the disease. In their mode of access Typhoid and Typhus fevers in many instances very much resemble each other. In the former however the disease is more gradual, insidious and treacherous while the latter is sharp and open, making its onset suddenly, and without any lingering premonition. The chief difference is that in Typhus fever the skin is hot and pungent and the sensations of heat and pungency are felt by the physician a considerable time after he has removed his hand from the surface. The odour from the patients body also differs. The odour from Typhoid comes being of a stale and cadaverous character while in Typhus it is pungent and ammoniacal

Physicians have become so familiar with this odour, as to diagnosticate the disease on their immediate entrance into the patients chamber. There is also a difference in the thoracic symptoms. The nervous symptoms also simulate each other, but in Typhus they are more constant and prominent, and the prostration of muscular strength is more immediate and profound. In the abdominal symptoms there are numerous and important differences. There is spontaneous diarrhoea, or susceptibility to cathartic medicine with liquid, ochre coloured stools in Typhoid, and constipation, and the stools when passed dark and slimy in Typhus, while it is very rare in

Typhoid. The cutaneous eruptions also furnish valuable differences in the two diseases for. Diagnosis Inflammation of the brain sometimes simulate this disease. The diarrhoea. Epistaxis and heaviness without delirium in the first stage and the sudamina, rose spots and tympanitis of the second suffiecently distinguish Typhoid from this form of disease

— Prognosis —

In the part of the state where I reside this disease seldom or never proves fatal. Of all the cases which I have seen and of many others. of which information was given me, numbering probably in all thirty cases but one proved fatal—

and this occurred from perforation of the intestine. The prognosis must be cautious because that destructive perforation and the consequent escape of the contents into the peritoneum. is liable to occur at any time even in the mildest cases. Among the most unfavorable symptoms are steady and persistent delirium. profound coma, stertorous respiration. excessive subsultus tendinum. Muscae volitantes. hemorrhage, involuntary discharges of urine and faeces and a frequent and feeble pulse rising suddenly up to 160 in the minute. Extreme prostration colliquative sweats and great abdominal distension yet there is

no one of these which has not been follow-
ed by recovery. I have seen cases pre-
senting all these symptoms, and as it
were on the brink of the grave, recover
rapidly and promptly. The favorable
symptoms are diminished frequency of
the pulse, it being at the same time
fuller and stronger, interest in sur-
rounding objects, a restoration of the
healthy secretions, and a disposition
in the tongue to become moist and clean
the younger the patient and the better
his previous health, the more favorable
is the prognosis—

—Treatment—

There is probably no disease in which
too much or improper medication proves

more injurious than in the disease under consideration, and few can be better combatted and guided to a favorable termination by correct and properly timed Therapeutic means. Hence it is in this disease more than any other in which the knowledge and skill of the Physician is displayed. and not a few have obtained marked celebrity in its treatment successfully This malady which at no great period previous was considered as so dangerous, and proved in almost all cases so fatal, has by the experience of honest, intelligent and skillful practitioners become

for the most part harmless and entirely within our control. While the older and less scientific practitioner and without the Quack endeavours to limit the duration of this disease, and thus by our medication sent their patients almost universally to a premature grave; the Later Physician with more of practical tact and skill awaits the symptoms, and applies his agents as they arise withholding every thing but what is absolutely indicated, husbanding the strength of his patient for the needs of debility which must inevitably await him, saves in alt-

most all cases his patients from beds of danger and suffering to their accustomed health. It is perfectly preposterous and absurd to endeavour to cut short a case of Typhoid fever by too much or active medication it must run its accustomed course. The indications are to treat the symptoms as they arise, and thus assist nature in her efforts when she proves insufficient to accomplish her work.

General or local bleeding is rarely indicated in this disease, and I believe out never to be resorted to unless there is danger of determination to vital organs, or violent inflammation

in any organ. I have never yet seen a case in which bleeding was indicated. As there is almost always a susceptibility to cathartic medicine an active purge is contra-indicated. We should however if it be found necessary evacuate the Rectum and procure one full stool daily, which can well be done by Castor oil, Sulphate of Magnesia in the first stage and Rhubarb in the later stages of the disease. After the evacuation of the intestinal canal, it having been indicated, in ordinary cases little else is to be done during this stage. Refrigerant diaphoretics should be used from the commencement. The effu-

nucing draught will answer the purpose very well. Cold applications can be kept constantly on the head to relieve troublesome sensations, headache etc. Frequent sponging the entire surface of the patient with vinegar, etc to relieve disagreeable warmth. The application of a large mush poultice over the elliptical patches and allowed to remain at intervals during the disease, and small doses of Hydr. C. Creta. To promote secretion, and correct acidity etc. will answer well the indications in a deviary cases of Typhoid fever during the first week.

The disease having advanced to the

second stage the nervous symptoms appear, viz- delirium. Subsultus tendinum Muscae Volitantes. picking at the bed clothes. Sardonic. grin Etc- Now to allay these symptoms, there is no article of the Materia Medica. so valuable, and so efficacious as the Spts of Nitric Ether. forty drops of which may be given every two, three, or four hours, combined if necessary with other articles to answer other indications. This medicine is lamentably underrated by the profession and has heretofore been seldom administered. I have had the pleasure of curing numerous cases presenting these nervous symptoms with great severity, yeild. rapidly and promptly. to this agent. So that the pa-

tient of yesterday toned about by the tumult and vehemence of these nervous symptoms, completely at their mercy and under their dominion, has become to-day calm, quiet, intelligent, and feeling much improved. I have no doubt but that in time this remedy will supersede all others, and thus bring these symptoms heretofore so alarming, so obstinate, so baffling to our skill completely under our management and control. The Physicians in those regions where this disease so extensively prevails in its purity and severity, use this Therapeutic agent, and they declare that they have never found a remedy which produced such admirable effects, and which allayed so success

fully these nervous symptoms. Should diarrhoea occur, if mild can be left to take its course if exhausting can be checked with Mins. Opii - Plumbi Acetas Etc - The thoracic disorder should they be severe can be combatted with. the stimulant expectorants. Squill. Vin Ipecac. Etc - Acidity of stomach connected with the Alkalis - Potas - Soda Etc - Lact will be useful in the second stage

The disease having advanced to the third stage - and debility having overtaken the patient - we must assist Nature in her struggles to overcome the disease he must support the failing powers - The most effectual agents will be. Wine Whey, Brandy - Carbonate of Ammonia Etc. The Camphor Julep is an excellent

stimulant and very generally employed. Should the powers of life begin to fail and the extremities become cool. blisters applied to the wrists, ankles, Etc - sponging the surface with vinegar, Brandy - Capsicum. Etc and frequent draughts of Brandy with ice most cases bring about reaction of the powers of life -

Very often after the seventh or ninth day a condition of things supervene which must be combatted by other means. There is a deficiency of secretion, the tongue and skin are dry, the urine scanty, the pulse feeble and tympanites, with more or less delirium. Under these circumstances there is nothing so efficacious as Mercury. The blue mass is to be preferred. Under its influence

the tongue becomes moist, and the skin relaxes and there is generally an amelioration of all the symptoms. Should the disease still progress, and the lymphatics remain undiminished, with the tongue parting with its fur in flakes, commencing from the centre, then we must have recourse to the Oil of Turpentine, and under its use I have seen the most beneficial results obtained, acting as it were like a charm. Under its use the tongue becomes moist and clean, the lymphatics diminishes, and a healing action is begun in the ulcerated glands, which soon granulate and cicatrize. The diet of the patient should be attended to. In the early stages liquid substance should be given

Solutions of G. Arabic. Rice water. Toast and water cold lemonade Carbonic Acid water and iced water may be given for drinks. At a more advanced period, when the symptoms of debility begin to show themselves, it will be necessary to support the strength - Tapioca, sago, etc - milk - Animal broths, Beef tea, milk punch may be given in the later stage. The period of convalescence also requires attention. The bowels should be kept daily open by the mildest laxatives or enemata. And attending to the diet, for the least thing will light up inflammation again in the elliptical patches. Fatiguing exertion should be avoided. The patient should be brought gradually back to his accustomed modes of life, without any strain upon his mental or physical powers —

An
Inaugural Thesis
On
Typhoid Fever

Submitted to the
Examination of the

Trustees, Regents and Faculty
of the University of Maryland
for the Degree of Doctor
in Medicine

By

Wm. W. S. Taylor
of Baltimore
Maryland

Valedictory.

Gentlemen:—

The period has at last arrived which to the student is most momentous. You now make on me the final demand for an evidence of having improved the "talent" entrusted to my care during the time I have had the pleasure to ramble in the halls of science over which you presided.

In discharging this duty, which to most students is never pleasant, always disagreeable and of doubtful utility, I am perfectly aware that, your last demand is one on some matter or a subject which has been before the world for

centuries and in its elucidation and developement, has engaged the minds of the sciences of the science of which I purpose to become a member. I have carefully and diligently investigated truth whenever she has to be found and have in the short probationary period of two years become familiar of the elementary principles which, it is the chief course and duty of the young student of this science, to find on which to rest for the accomplishment of that union and for which he strives, that is to obtain an exact and intimate knowledge of the nature and science of medicine.

The matter which I purpose to bring before your

notice then will be drawn from the most truthful authors without entering into any potential discussion whatever.

For my subject I have selected that kind of fever most usually known by the various names of typhoid, enteric or continued fever.

The nomenclature of this malady is somewhat perplexing but is settled, with the exception of names with which it has been synonymized some are comparatively kept from confusion, the term typhoid will at least the most be adopted in this thesis, from the fact that its antiquity has given it too deep a hold on the medical world to be ousted

-ractice. The plate in his book on the Practice of Medicine represents the eruption as being the same week or ten days before which I have found distinct in almost all patients. Entire [illegible] time of onset by one week from the very abrupt [illegible] change in the intestines which is characteristic of this disease as the eruption is [illegible].

Symptoms. This disease like typhoid commences sometimes with the usual prodromata of fever, headache, and pain in the limbs, and often pain in the

[illegible] the face is flushed and the pulse accelerated; the tongue is white, the bowels constipated, the urine high colored, the appetite impaired. Sometimes the disease begins abruptly with a chill followed by the usual febrile symptoms, and the former mode of attack.

After the premonitory have subsided for a time, perhaps for several days or a week, the disease becomes more decided and the chills of ague and return have ceased, the [illegible] fever increases in intensity. There is much pain, hot and dry skin, flushed

general. Tremor simple of the little and general convulsion. In this second stage it is not to occur a loss of the hands or arms, a susceptibility to the action of other tics.

During the continuance of these symptoms there sometimes occurs a vertigo which is usually unnoticed except as a hesitation; the redness of the face in this disease is of a deeper hue than occurs in other forms and the [illegible] assumes a peculiar and characteristic fierceness or [illegible].

Up to the seventh or eighth day there occurs no change in these symptoms except that the pulse becomes more rapid and less strong; the heat of the

[illegible] the tongue [illegible] itself with a thicker fur and shows a tendency to dryness or cleanness; the [illegible] of coun-tenance and duskiness of complex-ion deepen; diarrhoea is not in-frequent and a gurgling in the region of the caecum [illegible]. The urine is sometimes slightly albuminous at other times scanty and high coloured. This stage is sometimes complicated with bronchitis.

In the establishment of the second stage new symp-toms are superadded and a change occurs in those already existing. The tongue becomes moist or [illegible] becomes dry and of a brownish colour. The abdomen is slightly tym-panitic, if the surface is care-

fully examined red spots will be observed usually occurring first upon the abdomen and then extending to the chest and sometimes [illegible] upon the neck and arms and other parts of the surface.

The heart is [illegible] ted by tolerable [illegible] in the [illegible] sometimes [illegible] to weakness occurs and the disease [illegible] from which it derives its appellation of typhus.

The gums, tongue, teeth and lips become covered with a dark or black crust. [illegible] is present and [illegible] [illegible] The surface of the [illegible] contracted and the [illegible] [illegible] [illegible] [illegible]

some situations and cold in others.
[illegible] complete [illegible]
[illegible] from
[illegible] the air, [illegible]
[illegible] or [illegible]
imaginary objects in the air;
motion [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible] may be affected
with furious delirium, subject
to tetanus and [illegible]
of the muscles of the face,
trismus and tetanus [illegible]
spine. Sometimes [illegible]
[illegible] [illegible]
[illegible] of urine, [illegible]
face [illegible] large hemorrhage
from the nostrils and bowels
and petechiae and vibices
upon the skin.

The capillary circulation
in [illegible] muscle [illegible] that

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] a slowly progressing, the heart becomes exhausted, and the maintenance respiration and rest terminate the patients existence.

[illegible] the value of [illegible] [illegible] that the pulse [illegible] gradually [illegible] to decrease [illegible]. [illegible] [illegible] more attention to [illegible] [illegible] and the tongue gradually [illegible] from its edges to the [illegible].

Sometimes instead of [illegible] [illegible] the [illegible] [illegible] off in flakes which indicates a tedious convalescence.

[illegible]

fatal termination, sometimes, while all these favourable symptoms exist, the intestine becomes perforated and the patient then dies with peritonitis.

The usual period at which death takes place is the third or fourth week but at his disease is not as the sixth day, he would of course be unable to survive that of death. Sometimes begins on the eighth or ninth but rarely before the third week.

This disease is subject to considerable variation in its course and is usually attended with disease of some other parts. The fever is sometimes exceedingly mild and

not attended with any of the typhoid symptoms I have previously mentioned.

Occasionally the diarrhoea is the prominent symptom throughout and may lead one to suppose that he has a case of chronic colonitis for one of typhoid fever but a careful examination will prevent this.

There is another class of cases in which the prominent symptoms are those of gastric or hepatic disorder, to which there may be some liability for those of bilious fever. They generally run their course rapidly before the characteristic symptoms of typhoid appear.

Sometimes the thoracic symptoms are predominant, and the cerebral symptoms are lost in those of pneumonia.

Some cases present symptoms which point to the brain as the organ especially affected. Stupor or delirium may be the only prominent symptoms, the patient not rousing to attention. These may point upon actual inflammation of the encephalic membranes or upon an active congestion of blood to the brain.

Lastly, symptoms may be produced from the lungs primarily.

Mitchell says that typhoid fever is a disease in which nervous symptoms

the body is more or less altered evinciing signs of congestion or inflammation. The most characteristic alterations though, exist in those elliptic or lenticular bodies usually [illegible] from me. Mr. [illegible] the age is ten or twelve. The alterations consist of a congestion, inflammation and [illegible] of these bodies. The changes are quite characteristic of this disease. In [illegible] to [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] of the [illegible] the bodies may be [illegible] shape, some being more [illegible] round than the [illegible] and elliptical. The alteration

become more marked the further we recede from the ileocecal valve and we find the whole mass enlarged. There is also an alteration upon the surface of the mesentery.

The minute closed glands throughout the jejunum, ileum and colon are found in a state of alteration or inflammation. The mucous membrane between the affected glands is sometimes thickened and at other softened and usually of a red colour but in some instances of a whitish or greyish.

The mesenteric glands are found enlarged, & they are in ripe.

Other parts of the alimentary canal present the same disease as the pharynx, which

is found covered with false mem-
brane or infiltrated with pus.
The esophagus is ulcerated.
The mucous membrane of the stomach
and intestines is generally
healthy, but may be red and
inflamed or ulcerated. The colon
is found distended with gas
and sometimes abnormally
narrowed, frequently from
the inflammation. The spleen
is generally found red and
enlarged. The liver is
soft or may be cirrhotic
with fatty degeneration.
The kidneys are otherwise
congested. The mesenteric
glands are enlarged. The heart is
the largest organ and generally
found dilated and the
lungs congested.

The causes of typhoid fever are not well [illegible] yet: it appears that the disease arises when numbers of human beings are aggregated together and hence its frequency in ships, prisons and hospitals.

This disease is unquestionably contagious but not so strongly as small pox. The ordinary depressing causes act as predisposing causes to this disorder.

The disease is said not to affect any one under [illegible] and above the age of [illegible]. The disease is rarely observed below puberty and above the age of [illegible] years, hence seizing its victims in the prime of life.

The nature of this affection is not known, [illegible] and his admirers call it a gastro-enteric but there is as much

[illegible] between intermittent pain and itch.

Treatment, we should evacuate the bowels freely in this disease to get rid of the irritated secretions, such as purgative as the Sulph. Mag. or castor oil with manna. When there is much pain in about 2 minims X or XX drops of laudanum with the oil.

During disease the intestines should keep them as strengthen the disease. Thin broth may be given in the second stages. Evacuations may be obtained by enemata when the intestines are very sensitive and particularly the terminal portion.

When the pulse is very

and full, some 8 or 10 ounces [illegible]
should be drawn, but even [illegible]
amount would be [illegible] in-
creased in some cases. Local
bleeding may be used at [illegible]
any point in the disease to ob-
viate local inflammation.
Refrigerants should be used from
the beginning and if there be
not much irritation of the [illegible]
we can for the first three or
four days simply [illegible]
of tartar emetic. When the [illegible]
gastric symptoms are [illegible]
should give Spirits Ether. [illegible]
sleep at night, when the [illegible]
symptoms do not [illegible]
we may give a small dose of
opium or morphia or laudana-
num may be given. Cold ap-
plications may be used to the
feet if [illegible]

bladder to the head. To allay the tympanites abstract a few ounces of blood or apply a large cataplasm to the abdomen. If the diarrhoea is moderate it may be allowed to continue, but if profuse, may be checked by small doses of Opium or Ipecacuanha to which may be added a few grains of Plumbi Acetas or Kino or Rhei Tinctura if necessary. Nervous symptoms may be combated by Hoffman's anodyne or Spts. Aetherei or Camphor mixture.

In slight cases this is all the treatment that is required but if they show a phase in the disease, we now have the vital parts flagging, tremulous thready pulse, the abdomen tympanitic and the pulse

flagging; the local determination of blood has given rise to topical inflammation. Under these circumstances no remedy is so much value as mercury, given to produce ptyalism, by which [illegible] while some laxative may be added as special or opium, the following is an excellent combination. ℞ Calomel. pil. ij grss. gr. xij; Specac. in pulv. gr. iij; Bicarb. soda gr. iij; Ext. nux. gr. ss. Misce et fiant pil. no. xij. ℞. One to be taken every hour.

But notwithstanding this treatment, the disease continues without amelioration of its symptoms, and if the tongue becomes brown and the abdominal tumors increase, then oil of turpentine is to be used. The intention here is to

[illegible] the tongue [illegible]
clean, regularly from [illegible]
to [illegible] days, [illegible] its [illegible]
flakes or [illegible] [illegible]
[illegible] return. We should
give it in doses of X drops every
two hours.

When the disease advances
towards a close, the debility is so
great that tonics and stimulants
must be absolutely required.
When the pulse becomes low and
feeble, the skin cold and the
tongue and teeth covered with
black scales, there can be
no doubt of the propriety of
using them; and the happiest
effects result from their use in
these circumstances.
The most valuable are the
sulphate of quinine, wine whey, and
carbonate ammonia. Five to ten

be given promptly and in sufficient
to produce the proper effect.
When the there is [illegible] than the
excessive debility powerful
rubefacient should be had
recourse to a cayenne pepper,
hot oil of turpentine, heated
brandy and ammonia. [illegible]
poultices may be applied to the
legs and arms; and blisters
of Spanish flies to the inner
sides of the thighs and trunk
care being taken not to leave
them on more than an hour
and to avoid blistering.

In cases of obstinate
delirium or coma the head
should be shaven and a large
blister applied. In [illegible]
[illegible]
[illegible] importance and [illegible]
The diet in this disease is all

important and should be of the highest and unrivaled kind. Solutions of rice, gum and [illegible] are the best; ripe fruits may be used as oranges, lemons and carbonic acid water ice water et cetera.

This gentleman is an compendium of the [illegible] would employ in hydrotherapy and which, it seems to me to be the most indicated and most rational. In conclusion I think you [illegible] may [illegible] [illegible] to [illegible] and regret that the time is drawing near when these strong ties which bind the teacher and learner are to be severed.

Yours Respectfully

[illegible]

An
Inaugural Dissertation
on
Typhoid Fever
Submitted for Examination
of the
Provost, Regents & Faculty
of
Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
William H Gwynn
of
Maryland

Typhoid Fever

This is perhaps one of the most common affections with which the human race is afflicted, and exists in all parts of the habitable globe. Although it is not known everywhere by the same nomenclature still the course, symptoms, and terminations are the same,

This disease is more remarkable perhaps than any other for its gradual and insidious mode of attack the patient often complaining a week before the disease makes its open onset, of slight pains in the head, back, and limbs of languor, and debility of the loss of appetite and of incapacity to attend to his or her usual avocations. Along with the above symptoms, the tongue on being examined will be found slightly coated, there is also some diarrhoea or a very great susceptibility to purgative medicines — sometimes however, though

rarely the attack commences abruptly without any premonitory whatever — either the above premonitory symptoms existing for a shorter or longer duration, the affection then fairly begins with all the ordinary phenomena of fever viz. furred tongue, chilly sensations, pain in the head and back, a quick pulse flushed face and a dry hot skin. However many of the above symptoms are sufficiently characteristic to distinguish this from other febrile diseases — the bowels are generally more frequent and feeble, and there is a clucky tone of the voice nasal which when well marked renders it an almost certain diagnostic sign. Another symptom of the disease is bleeding at the nose, and is regarded by some practitioners as one of its most certain signs. Headache also is an almost con-

stant attendent on the disease, and sometimes constitutes the chief sufferings of the patient.
There is often remission in the morning followed by exacerbation of fever in the evening.
The symptoms described above gradually grow worse from day to day; the pulse becomes more quick and feeble. the tongue is coated over with a thick fur - the complexion becomes still more dusky - diarrhoea often continues - the skin is dry and hot - the abdomen becomes tender on pressure, and sometimes tympanitic - cough becomes troublesome to the patient, and the physical signs of bronchitis are sometimes revealed -
The urine is sometimes natural, sometimes scanty and high coloured and sometimes offensive. -
At this stage of the disease other symptoms which had not heretofore appeared

now begin to manifest themselves - the tongue which had heretofore been moist now becomes dry - and has a brown appearance, the abdomen is more tender on pressure and seem much distended. Rose-colored spots appear first on the abdomen then gradually extend up to the neck - and sometimes even to the face. Delirium often sets in - ringing in the ears and hardness of hearing are almost always present at this period. The patient when told to protrude his tongue does so with difficulty, and often forgets to draw it in again.

If the disease is not arrested at this period, all the symptoms generally become worse; the pulse is extremely low and frequent, the skin is either hot and dry, or covered with cold sweat standing in isolated drops over the whole surface; the tongue is dry and cracked, and sordes collect on the teeth and

gums, The patient is so very feeble that he cannot support himself up in bed, and is consequently constantly slipping down towards the foot of the bed - Delirium is usually very severe, and sometimes even violent - sometimes there is great and profound coma - - Very often at this stage of the disease fatal symptoms begin to manifest themselves - such as an extremely low weak and fluttering pulse - involuntary fæcal evacuations - cold extremities, and the Hypocratic expression of countenance - Death at this period may occur in profound coma - or in the midst of violent convulsions -

But more frequently at this period, favorable symptoms begin to appear - these are - a gradual lessening in the degree of the frequency of the pulse - the ~~pa~~ skin becomes cooler, and moist, sordes begin to disappear from the teeth and gums, and the whole aspect of the

patient bears marks of improvement. Convalescence now generally may be counted upon very certainly and also speedily. Sometimes however, the tongue instead of cleaning gradually from the edges throughout its ~~surface~~ fur in large flakes from the middle, convalescence then will be very slow and tedious. Sometimes again the tongue on cleaning, if instead of remaining moist, should become dry, red, and shining, then again all the unfavourable symptoms are manifested, and the patient is thrown back into new dangers from which he can only be rescued by medical skill, and watchful attention.

There is sometimes a fatal termination to this disease which it may not be amiss to mention in this place. The patient in the midst of a very mild attack, or it may be in convalescence

is suddenly seized with extreme, and agonizing pains in the abdomen; at the same time there is almost incessant vomiting, chill after chill also follow each other in rapid and quick succession, the bowels are extremely constipated and at length that unfailing sign of death, the Hippocratic expression of countenance appears. These symptoms are caused by perforation of the intestines setting up peritonitis. Death generally occurs in one or two days from the beginning of the above symptoms though sometimes the patient may survive this terrible calamity.

The duration of the complaint is as variable as its symptoms are numerous. Sometimes convalescence sets in during the 1st or 2nd week. sometimes the decease continues for six, eight, or ten weeks. Death may occur as early as the sixth or seventh day, or

it may be postponed until the portetti-
In general however the disease may
be expected to continue from two to
four weeks—

The symptoms of this disease are so
variable that I deem it necessary to men-
tion some of the most important of them
individually—

Diarrhoea, according to some authors
exists in almost every case of the dis-
ease - according to others it is comparat-
ively rare - However it is generally very
mild, and only important as a di
agnostic sign. This should be a guide
to the practitioner in the administration
of purgative medicines - Diarrhoea general-
ly occurs on the first and second days
of the attack -

The pulse in this disease is perhaps more
uniformly frequent and feeble than
in any other, and this is one of its
best diagnostic signs, sometimes
though rarely the pulse is slower than

usual, and even has some degree of fullness. In the beginning of the attack, the pulse is from a hundred to a hundred and twenty in the minute, but towards the middle and end, it becomes extremely frequent amounting very often to a hundred and thirty, forty, or even sixty in the minute — Tympanites is a very frequent attendant on this disease, appearing generally on the sixth or seventh day - It is usually very mild at first - but afterwards the abdomen becomes very much distended, causing the patient on many occasions severe and prolonged sufferings - The amount of tympanites is generally in proportion to the amount of fever, in severe cases causing the abdomen to distend ~~the~~ enormously, and in mild cases producing very little inconvenience.

Cough is generally present, at first -

it is dry, but afterwards it becomes moist, and is often attended with mucous expectoration — Occasionally the crepitant, or sub-crepitant rail may be heard at this period manifesting inflammation of the lungs. Hemorhage from the nose very often occurs though generally it is very slight; and only important as a sign of the disease; if hemorhage from the bowels at any time occurs, it should be a cause of solicitude to the practitioner.

The nervous system is invariably affected, headache is very frequently present during the first week, but after this it generally yields to coma or delirium. Hebitude of mind is also very frequent, commencing with the fever, and continuing generally throughout. The patient is unwilling to be disturbed, he answers questions carelessly, and often refuses to do so at all —

sometimes he answers them shortly as if vexed. This delirium generally increases with the disease, and sometimes to coma or stupor — The patient can however generally be roused by calling him in a loud tone.
Delirium does not appear for several days, after the commencement of the attack, and is very variable in duration, sometimes lasting throughout the whole disease - and at others only for a few days. In point of severity the delirium is of every grade, from the mildest and most harmless, to the most violent, and dangerous, often requiring several persons to restrain the patient in bed. At times the patient is affected with strange notions, often imagining himself from home, he will insist upon returning, at other times that he is taking a walk and this will imitate with his

legs the action of walking.
Hardness of hearing is frequently present, sometimes it is mild at others it is very ~~large~~ great, amounting to deafness, though it generally passes away with the decrease—
The above mentioned symptoms are those most frequently met with in the typhoid fever of this country, though all of them are not to be found in every case, and in some cases a good many of them may be absent.
The anatomical lesions found after death are extremely various, indeed there is scarcely an organ in the body that is not more or less diseased, some of the organs are so uniformly diseased, as to be regarded by some pathologists to be essential to this fever, such for example are the

glands of Peyer, which have been noticed to be inflamed at any time of the disease after the sixth day. Whether or not they become inflamed before this time has not been ascertained as no opportunity has been afforded for a post mortem previous to this date — Other portions of the alimentary canal have been found affected; the pharynx, the oesophagus and the gastric mucous membrane are diseased in about one sixth of the cases. The spleen is very often, and variously affected, sometimes it is enlarged, sometimes lessened in size and at other it is so pulpy, as not to be able to support its own weight —
The liver, the colon, the heart, the kidneys, indeed nearly all the viscera are affected. The brain exhibits less of disease, than might have been expected from the amount of

delirium, during the existence of the fever, I believe in a large majority of cases it is quite healthy; occasionally it is congested

Little is known of the cause of typhoid fever – it appears to prevail to a large extent where human beings are crowded together; the decom position of animal matter is said to favour the production of the disease, hence students of medicine engaged in dissecting, have been observed to be frequently attacked with this malady –

It was at one time believed that the disease was contagious, and some medical men think so still, however the amount of testimony is decided by in favour of its non-contagiousness –

Age appears to exert a great influence over the disease neither the very young, nor old are liable to it –

The age most favourable for its development appears to be from eighteen to thirty.

As little is known of the nature of this malady, as of its cause; a great many opinions have been advanced, but nearly all of them have been abandoned as merely conjectural. It appears to bear some resemblance to the exanthematous fevers by the eruption of rose-coloured spots on the abdomen which is as almost a common symptom of this disease, as the eruption is of small pox or measles. But the true essential ~~fever~~ nature of typhoid fever remains yet unknown, and so it will until a more scientific age sheds more light upon the pathology of typhoid fever.

The diagnosis of this fever may generally be known by the patient feeling unwell for several days, before an

open onset, by diarrhoea, bleeding at the nose, by frequent feeble and small pulse, by dusky hue of countenance, by the patient answering questions slowly, or refusing to do so altogether, by debility of mind, and hardness of hearing, and on the sixth or seventh day of the disease, by the appearance of rose-coloured spots on the abdomen —

This disease is distinguished from bilious fever, by the latter having a daily tendency to remission, by the yellow hue of countenance, and by its shorter duration.

It is distinguished from typhus fever, by the tendency to constipation in the latter, and by its commencing more abruptly than typhoid. The eruptions in typhus fever is different from that in typhoid; the eruptions in typhus is less elevated and less round — and generally com-

mences earlier, and is darker in appearance. When we consider the slow and insidious attack, the delirium, the epistaxis, the dusky hue of countenance and several other symptoms, the diagnosis of typhoid fever cannot be easily mistaken except by carelessness and inattention.

The prognosis varies very much according to the age, and constitution of the patient, and the treatment he receives, as few diseases yeild more kindly to the influence of medicines than this. But the physician ought to be very guarded in forming a prognosis, as there is no case now so simple but may end in death, nor any so violent, but may end in recovery. The unfavourable symptoms, are an extremely low, feeble, and fluttering pulse, great and profound coma, or active and wild delirium, involuntary fecal evacuations, extreme prostration, coldness of the extremities, and subsultus tendinum.

The favorable symptoms are, a slow and full pulse, absence of delirium, a cool moist skin, and a disposition in the patient to notice surrounding objects.

The disease does not demand active cathartics in the beginning, on account of the great susceptibility of the patient to diarrhoea. As a general rule, a small dose of the sulphate of magnesia, or castor oil, is sufficient to clear the bowels of all irritating substances, afterwards it will be sufficient to procure one full discharge daily. If there is any pain or uneasiness in the abdomen, it will be advisable to combine fifteen or twenty drops of the tincture of opium with the purgative. The next indication is to lessen the degree of febrile excitement, blood letting may be employed, when there is a tolerable degree of strength of the pulse, and threatened inflammation of the brain, Blood letting however is

the exception, and not the rule in typhoid fever, the practitioner ought to bear in mind that the malady cannot be cut short, and its tendency to wear out the nervous strength of the patient. Local bleeding however may be used with greater freedom, and in nearly all stages, where there is much local inflammation.

Refrigerants diaphoretics are of the highest importance, in the treatment of this fever; In bad some practitioners rely on their use exclusively; the citrate of potassa in the form of a neutral mixture is the one most frequently used. When there is much irritability of stomach, a small dose of opium may be added to the mixture; if there is much restlessness at night, it can often be quieted by a quarter of a grain of the sulphate of morphia. Cold applications are also used with marked benefit when there

or much febrile excitement, or heat of surface.

Local affections should not be overlooked in the treatment; severe head ache may be relieved by small bags of ice kept to the head. Tenderness of the stomach is often benefitted by abstraction of a small quantity of blood, by leeches, or cups. The diarrhoea that occurs in the progress of this fever, is generally of so mild a character, that very little of any treatment is necessary, however, should it become severe, opium combined with ipecacuanha, acetate of lead, and kino will prove of advantage.

As the disease advances other remedies become necessary, or often a different plan of treatment is required, for now it must be tonic and strengthening. The best tonic in this disease, as it is in so many others, is the sulphate of quinia. Professor Chew of the

University of Maryland has used it for a long time with the extreme success in the Baltimore Infirmary. It often becomes necessary to use stimulants in the progress of the disease, whenever in the course of the disease, the pulse becomes extremely low, weak, and fluttering, and the powers of life evince great prostration, stimulants are then clearly indicated, and the physician would be guilty of great injustice both to himself, and to his patient not to use them, and use them freely.

The oil of turpentine has enjoyed a high reputation among some practitioners of medicine, and among the rest, Professor Wood of the University of Pennsylvania, it may be used in any case of the last stages, where the tongue is dry, and the abdomen tympanitic.

Attention to the diet in the treatment of typhoid fever is as important as the

medicines employed— In the first stage, the patient should be kept on a low unstimulating diet, and principally liquid substances, such as rice water, barley water, weak gruel &c. In the latter stages of the disease, when symptoms of debility begin to appear, the diet should be more nutritious, though unstimulating. Sea may now be used in small quantity, and also milk and a little rice.

At a still later period, when the system is more debilitated, the diet should then be not only nourishing, but even stimulating, animal broths, wine + whey, and milk punch must be used. beef tea is perhaps the best agent in this stage, and should be pretty freely employed. The apartment of the patient should also be attended to during the whole of the attack, and kept clean and well ventilated